

S.R. 32 / NUCOR ROAD AREA SANITARY SEWER COLLECTION SYSTEM

MONTGOMERY COUNTY REGIONAL SEWER DISTRICT

Regional Sewer Board

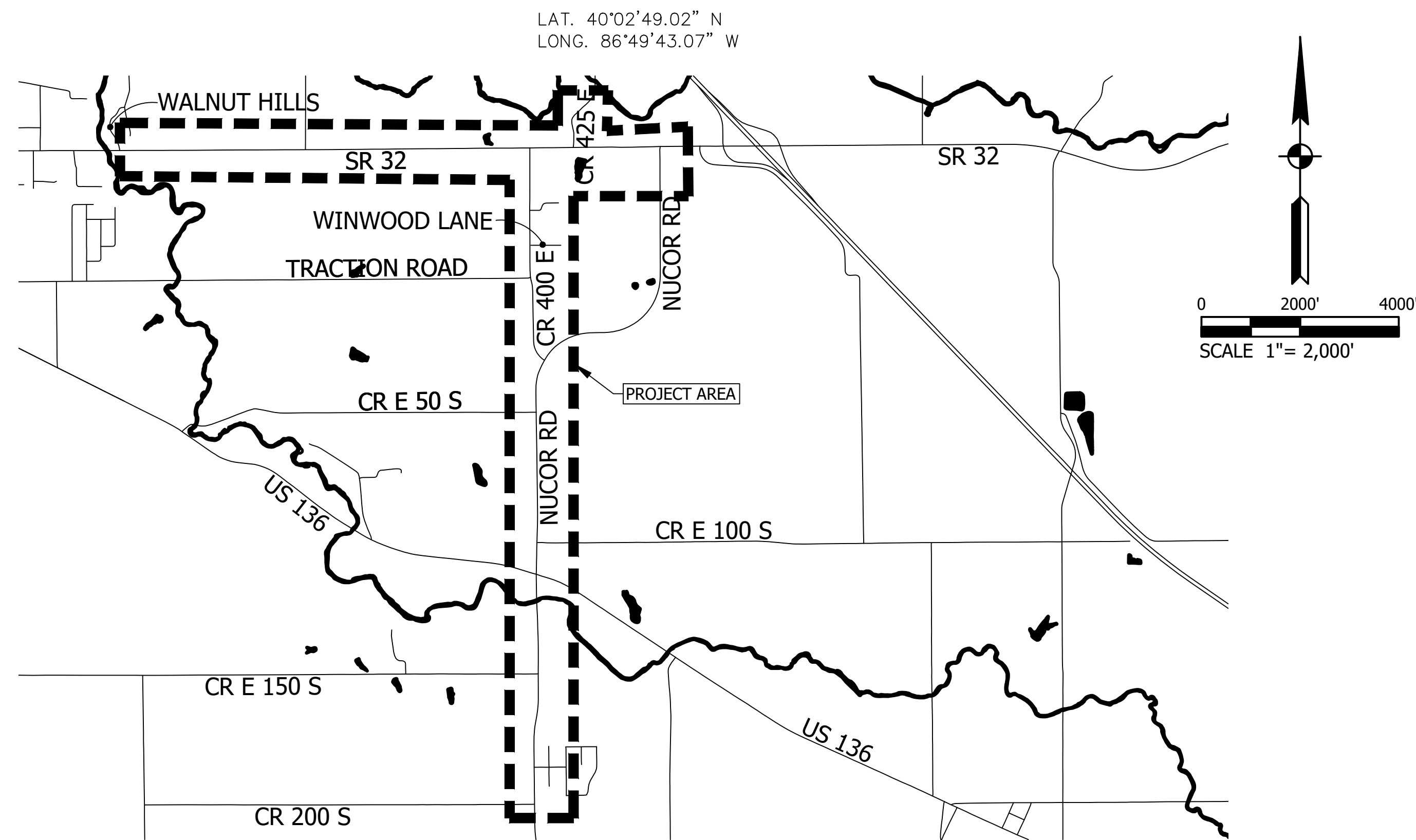
2018 BOARD MEMBERS:

Phil Bane, President
 Terry Hockersmith, Vice President
 Brad Monts, Secretary/Treasurer
 Mark Davidson, Member
 Joe McCutcheon, Member

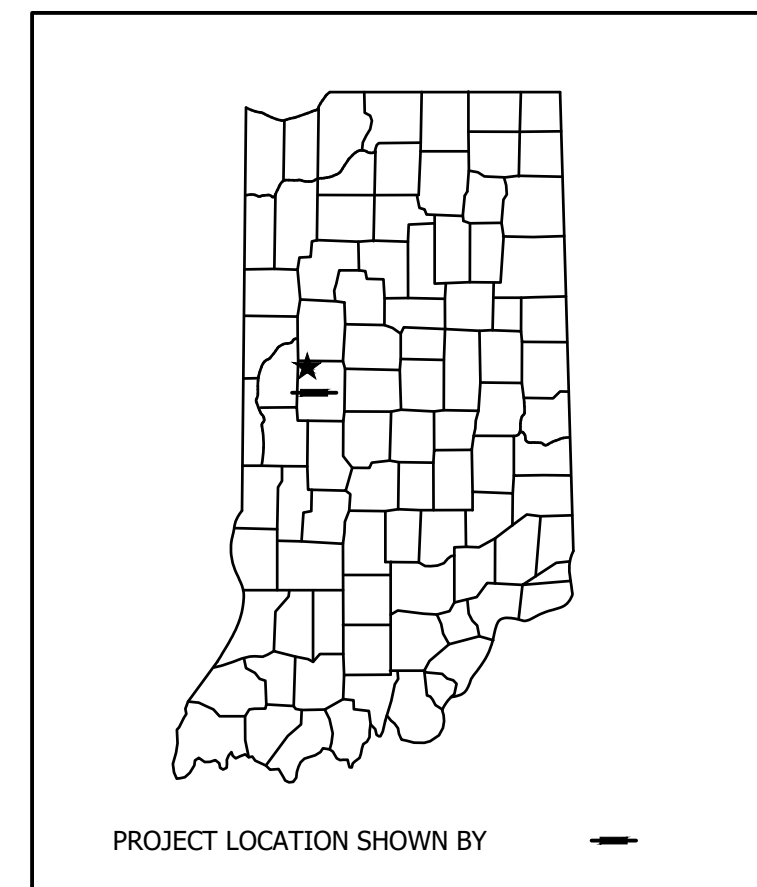
Stu Weliever, Board Attorney
 Laura Dossett, Co-Treasurer & Recording Secretary

DRAWING INDEX

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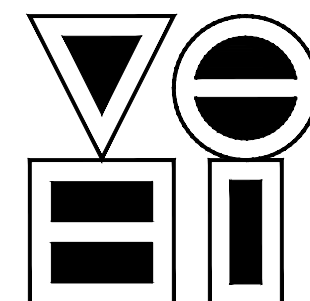


LOCATION MAP
 SMARTSBURG, MONTGOMERY COUNTY INDIANA



DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\01-General Sheets\ LTSCALE:0.5
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 DATE: Jun 06, 2018 - 6:23pm

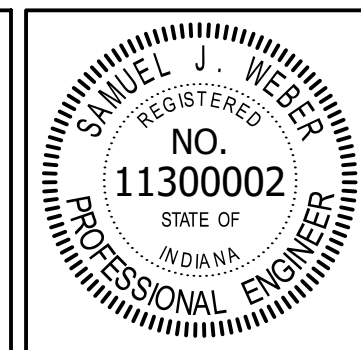
REVISIONS			
NO.	DATE	DESCRIPTION	BY



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 vse1@vsengineering.com www.vsengineering.com
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 PHONE NUMBER
 CERTIFIED BY: *Samuel J. Weber* 06/07/2018 DATE
 SAM WEBER P.E., INDIANA REG. NO. 11300002



BRIDGE FILE	N/A
DESIGNATION	N/A
SHEETS	01 of 126
PROJECT	15-3371

UTILITIES

- AT&T-DISTRIBUTION** CONTACT: MATT SPINDLER
240 N. MERIDIAN ST., ROOM 1791
INDIANAPOLIS, INDIANA 46204
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- CENTURYLINK (CTLQN)** CONTACT: FIBER PROTECTION CENTER
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DENVER, CO 80202
PHONE: (800) 283-4237 EXT 3
- COMCAST (CRAWFORDSVILLE)** CONTACT: JOHN GAYDAY
720 TAYLOR STREET
FORT WAYNE, INDIANA 46802
PHONE: (260) 458-5107
- CRAWFORDSVILLE ELECTRIC LIGHT & POWER** CONTACT: ROY KASER
PO BOX 428
CRAWFORDSVILLE, INDIANA 47933
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EMAIL: ROYK@CELP.COM
- TOWN OF DARLINGTON** CONTACT: JUDY ANDERSON
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EMAIL: TIM.UMBAU@DUKE-ENER.COM
- IN AMERICAN WATER (CRAWFORDSVILLE)** CONTACT: RANDY WINSTON
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- MONTGOMERY COUNTY REGIONAL SEWER DISTRICT** CONTACT: LAURA DOSSETT
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- TIPMONT R.E.M.C.** CONTACT: JOE KLINE
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EMAIL: JKLINE@TIPMONT.ORG
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DANVILLE, INDIANA 46122
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EMAIL: .BMANKA@VECTREN.COM
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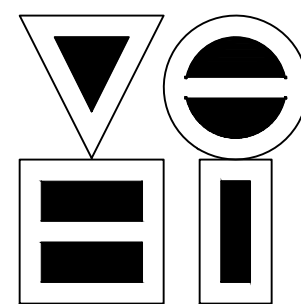
GENERAL NOTES

1. ALL PRESSURE PIPING MAY BE INSTALLED BY HORIZONTAL DIRECTIONAL DRILLING OR BY OPEN CUT UNLESS REQUIRED TO BE ONE OR THE OTHER AS SHOWN IN THE PLANS. CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS TO PREVIOUS CONDITIONS OR BETTER NO MATTER THE INSTALLATION METHOD. ALL RESTORATION COSTS INCLUDING, BUT NOT LIMITED TO PAVEMENT, DRIVEWAYS, MAILBOXES, FENCING, LANDSCAPING AND DRAINAGE INFRASTRUCTURE SHALL BE INCLUDED IN THE COST OF THE PIPE INSTALLATION.
2. ALL PIPE CROSSINGS UNDER S.R. 32 AND NEWCOR RD. SHALL BE COMPLETED BY TRENCHLESS INSTALLATION METHODS. PRESSURE SEWER SHALL BE COMPLETED BY HORIZONTAL DIRECTIONAL DRILLING. GRAVITY SEWER SHALL BE COMPLETED BY JACK AND BORE.
3. PROPOSED LOCATIONS OF LATERALS ARE SUBJECT TO CHANGE DUE TO THE REQUIREMENTS FOR THE CONTRACTOR TO DISCUSS AND VERIFY THE LOCATION WITH THE PROPERTY OWNER. CHANGES TO PROPOSED LATERAL LOCATIONS SHALL BE AT NO ADDITIONAL COST TO THE OWNER. ALL LATERAL LOCATIONS SHALL CONFORM TO THE OWNERS STANDARDS AND CODES AS WELL AS 327 IAC, RULE 6. CONTRACTOR IS RESPONSIBLE FOR DECOMMISSIONING EXISTING SEPTIC SYSTEMS, INSTALLATION OF SEWER LATERALS, CONNECTION TO PROPERTY OWNER SEWERS, AND IN SOME CASES, INSTALLATION OF GRINDER PUMP STATIONS AND ELECTRICAL/CONTROLS. SEE SHEET 106 FOR MORE INFORMATION IN THE SEWER LATERAL SUMMARY TABLE. A QUANTITY FOR INSTALLATION OF THE LATERALS INSTALLED OUTSIDE THE R/W IS INCLUDED IN THE PROJECT; HOWEVER, THE LOCATION AND DEPTH OF PIPE OUTSIDE THE R/W IS NO SHOWN SINCE THIS INFORMATION WILL VARY DEPENDING ON THE LOCATION OF THE SEPTIC SYSTEM AND DESIRED LOCATION TO CONNECT TO THE NEW LATERAL. CONTRACTOR SHALL VERIFY FEASIBILITY AND LOCATION OF ALL LATERALS AND REPORT FINDINGS TO ENGINEER OR OWNER REPRESENTATIVE BEFORE LATERAL INSTALLATION IS UNDERWAY. ALL RESTORATION COSTS ASSOCIATED WITH WORK OUTSIDE THE R/W SHALL BE INCLUDED IN THE COST OF THE LATERAL PIPE INSTALLATION AND AT NO ADDITIONAL COST TO THE OWNER.
4. PAVEMENT DETAILS VARY DEPENDING ON WHICH ROAD IS IMPACTED. MONTGOMERY COUNTY DETAILS GOVERN C.R. 400 E, C.R. 425 E, AND WINDWOOD LANE. INDOT STANDARD SPECIFICATIONS GOVERN S.R. 32 AND NUCOR ROAD.
5. SIZE, MATERIAL, DEPTH AND LOCATION OF KNOWN EXISTING DRAINAGE OR SANITARY SEWER FACILITIES IS FROM AVAILABLE HISTORIC INFORMATION AND ABOVE-GROUND INSPECTION AND MEASUREMENT. LIMITED CONFINED SPACE ENTRY WAS UTILIZED. THE CONTRACTOR SHALL THEREFORE VERIFY ALL DRAINAGE OR SANITARY SEWER INFORMATION CONTAINED IN THE CONTRACT DOCUMENTS PRIOR TO ANY CONSTRUCTION WHICH WOULD BE IMPACTED BY FACILITIES NOT LOCATED AS SHOWN IN THE CONTRACT DOCUMENTS. THE COST TO CORRECT ANY FACILITIES INSTALLED PRIOR TO VERIFICATION OF EXISTING CONDITIONS BY THE CONTRACTOR SHALL BE AT NO COST TO THE OWNER. DIFFERING CONDITIONS DISCOVERED DURING VERIFICATION WILL BE HANDLED PER THE CONTRACT DOCUMENTS.
6. HORIZONTAL AND VERTICAL LOCATIONS OF UTILITIES ARE SHOWN, BUT THESE LOCATIONS ARE ESTIMATES AND AREN'T INCLUSIVE OF ALL EXISTING FACILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES DURING CONSTRUCTION.
7. THE LOCATION OF UTILITIES AND STRUCTURES, BOTH SURFACE AND SUBSURFACE, ARE SHOWN ON THE PLANS FROM DATA AVAILABLE AT THE TIME OF SURVEY AND ARE NOT NECESSARILY COMPLETE OR CORRECT. DETERMINING THE EXACT LOCATION AND PROTECTING UTILITIES AND STRUCTURES IS THE RESPONSIBILITY OF THE CONTRACTOR. DURING CONSTRUCTION, THE CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES AND STRUCTURES WHETHER SHOWN ON THE PLANS OR NOT. IF DAMAGE IS CAUSED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR AND RESTORATION IN ACCORDANCE WITH THE REQUIREMENTS OF THE UTILITY OWNER AND FOR ANY RESULTING CONTINGENT DAMAGE AND COST. ALL REPAIRS SHALL BE AT NO COST TO THE OWNER.
8. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN IN SERVICE ALL EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION UNLESS OTHERWISE INDICATED IN THE DRAWINGS. ANY UTILITY WHICH CAN BE REMOVED DURING CONSTRUCTION WITHOUT UNDUE INTERRUPTION OF SERVICE MAY BE REMOVED AND REPLACED BY THE CONTRACTOR WITH THE PERMISSION OF THE OWNER AND THE APPLICABLE UTILITY OWNER.
9. BEFORE WORKING WITH OR AROUND EXISTING UTILITIES, THE APPLICABLE UTILITY COMPANY SHALL BE CONTACTED BY THE CONTRACTOR.
10. THE CONTRACTOR SHALL PRESERVE AND PROTECT PROPERTY MARKERS, SECTION CORNERS, SURVEY MARKS AND BENCH MARKS, SUCH AS STONES, PIPES, OR OTHER MONUMENTS ENCOUNTERED, IF THE CONTRACTOR MUST DISTURB THE PROPERTY MARKERS OR MONUMENTS, THEIR HORIZONTAL AND VERTICAL LOCATION SHALL BE DETERMINED AND RECORDED BY A REGISTERED LAND SURVEYOR AND THE OWNER NOTIFIED BEFORE DISTURBING. ALL PROPERTY MARKERS AND MONUMENTS DISTURBED DURING CONSTRUCTION SHALL BE RE-ESTABLISHED BY A REGISTERED LAND SURVEYOR AT NO COST TO THE OWNER.
11. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE AREA; NO EXTRA COMPENSATION CONNECTED WITH OVERHEAD UTILITIES WILL BE ALLOWED.
12. THE CONTRACTOR IS RESPONSIBLE FOR DUST AND MUD CONTROL FOR THE DURATION OF THE PROJECT.
13. THE CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION TRAFFIC CONTROL AND MAINTENANCE.
14. THE CONTRACTOR IS SOLELY AND COMPLETELY RESPONSIBLE FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING EROSION CONTROL AND THE SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ALL LIABILITY, REAL, OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OR WORK ON THE PROJECT.
15. THE COST OF ABIDING BY THE PROVISIONS OR PERMITS ISSUED BY VARIOUS AGENCIES SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT. ALL ASSOCIATED BONDING REQUIREMENTS AND COSTS SHALL ALSO BE CONSIDERED INCIDENTAL TO THE CONTRACT.
16. THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITIES WITH THE OWNERS OF PROPERTY ON OR NEAR WHICH CONSTRUCTION IS TAKING PLACE. THE CONTRACTOR SHALL DILIGENTLY ATTEMPT TO ACCOMMODATE THE NORMAL ACTIVITIES OF PROPERTY OWNERS ALONG THE PROJECT ROUTE AS WELL.
17. MINIMUM SEPARATION DISTANCES BETWEEN POTABLE WATER FACILITIES AND SANITARY FACILITIES MUST BE MAINTAINED AS DETAILED IN "327 IAC 3, RULE 6, TECHNICAL STANDARDS FOR SANITARY COLLECTION SYSTEMS". IT IS EMPHASIZED THAT A MINIMUM OF 10' OF SEPARATION BE PROVIDED HORIZONTALLY BETWEEN POTABLE WATER FACILITIES AND THE EXTERIOR OF SANITARY STRUCTURES, INCLUDING PRECAST MANHOLES AND POURED-IN-PLACE STRUCTURES.
18. CONSTRUCTION SHALL COMPLY, AT A MINIMUM, WITH 327 IAC 3, RULE 6, TECHNICAL STANDARDS FOR SANITARY COLLECTION SYSTEMS.
19. ALL FLEXIBLE AND SEMI-RIGID GRAVITY PIPE SHALL BE DEFLECTION TESTED PER THE CONTRACT DOCUMENTS USING A CORRECTLY SIZED MANDREL FOR THE SPECIFIED DEFLECTION LIMIT. TESTING WILL NOT BE ACCEPTED IF IT OCCURS SOONER THAN 30 DAYS AFTER INSTALLATION AND BACKFILL.
20. ALL SANITARY GRAVITY PIPE IS TO BE TESTED FOR WATERTIGHTNESS. ALL PIPES SHALL BE TESTED USING THE LOW PRESSURE AIR TEST PER THE CONTRACT DOCUMENTS.
21. WORK NOT SPECIFIED FOR PAYMENT AS OR PART OF A SPECIFIC PAY ITEM SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT BY THE CONTRACTOR.
22. COORDINATION AND PROPER FIT OF ALL PROJECT ELEMENTS IS THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR SHALL CONDUCT A PRE-CONSTRUCTION STAKEOUT OF THE PROJECT ELEMENTS TO VERIFY THE COORDINATES PROVIDED. SUSPECTED ERRORS OR DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER AND RESOLVED BEFORE CONSTRUCTION BEGINS.
23. THE CONTRACTOR SHALL ATTEND ONE PUBLIC MEETING CONCERNING THE PROJECT.
24. THE CONTRACTOR SHALL PRACTICE WORKPLACE RECYCLING OF ALL REFUSE GENERATED BY EMPLOYEES AND VISITORS AND AS A RESULT OF CONSTRUCTION. THIS SHALL INCLUDE, AS A MINIMUM, PROVIDING SEPARATE DEPOSITORIES FOR EACH UNIQUE RECYCLABLE MATERIAL AND DELIVERY OF SAME TO A LOCAL RECYCLING FACILITY. THE CONTRACTOR SHALL DOCUMENT ALL RECYCLING ACTIVITIES FOR REVIEW BY THE ENGINEER. THE COST OF THE CONTRACTOR'S RECYCLING PROGRAM SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE PROJECT.
25. THE CONTRACTOR SHALL ABIDE BY ALL REQUIREMENTS FOR DISPOSAL OF HAZARDOUS MATERIALS, INCLUDING PROVIDING DOCUMENTATION OF LEGAL DISPOSAL FOR REVIEW BY THE ENGINEER. THE COST OF THIS DISPOSAL AND MANAGEMENT SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE PROJECT.
26. CONTRACTOR SHALL NEATLY TRIM BRANCHES OR LIMBS WITHIN THE R/W THAT ARE IMPACTED BY EQUIPMENT OR IN THE WAY OF THE WORK. NO TREE SHALL BE CUT WITHOUT THE PRIOR WRITTEN PERMISSION OF THE ENGINEER OR OWNER UNLESS DESIGNATED BY THE CONTRACT DOCUMENTS FOR REMOVAL.
27. CONTRACTOR SHALL SURVEY ROAD CROSS-SECTIONS PRIOR TO CONSTRUCTION FOR USE IN RESTORATION. SEE SPECIFICATION SECTION 01050 FOR REQUIREMENTS.
28. IN GENERAL, FLOWABLE BACKFILL IS TO BE USED WITHIN 5' OF PAVEMENTS.
29. CONTRACTOR SHALL PROVIDE SAFE, CONTINUOUS VEHICULAR ACCESS TO ALL PROPERTIES FOR NORMAL DAILY USE AND FOR EMERGENCY SERVICES. SUCH ACCESS SHALL INCLUDE, BUT NOT NECESSARILY BE LIMITED TO, PROVIDING, INSTALLING AND MAINTAINING TEMPORARY GRAVEL OR HMA ROADWAY ON OR ADJACENT TO EXISTING ROADS ANYWHERE NORMAL ACCESS IS HAMPERED BY CONSTRUCTION ACTIVITIES. PARTICULAR CARE IS TO BE GIVEN TO ROADS WITHOUT MULTIPLE ENTRANCES, SUCH AS CUL-DE-SAC AND DEAD ENDS. CONTRACTOR SHALL OBTAIN ALL PERMITS, AND SHALL PROVIDE ANY SIGNAGE OR FLAGGING THAT MAY BE REQUIRED OR, IN THE OPINION OF THE ENGINEER OR OWNER, BE NECESSARY TO PROVIDE ADEQUATE ACCESS. ALL TEMPORARY ACCESS SHALL BE REMOVED AND ALL DISTURBED SURFACES SHALL BE RESTORED BY THE CONTRACTOR, THE COST FOR THIS SHALL BE PAID FOR AS PROVIDED IN THE TECHNICAL SPECIFICATION SECTION 01025.
30. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTION AND CONTINUED SERVICE OF ALL EXISTING UTILITIES, INCLUDING ALL INDIVIDUAL SERVICE LINES. THE CONTRACT DOCUMENTS DO NOT DISTINGUISH BETWEEN MAIN UTILITY LINES AND INDIVIDUAL SERVICE LINES REGARDING PROTECTION, SUPPORT, COORDINATION AND CONTRACTOR RESPONSIBILITY. CONTRACTOR SHALL PROVIDE A CRADLE OF FLOWABLE FILL UP TO THE CENTERLINE OF EXISTING GAS, WATER AND SEWER UTILITY MAINS AT ALL LOCATIONS WHERE THE NEW WORK CROSSES UNDERNEATH. THE FLOWABLE BACKFILL CRADLE WILL NEED TO EXTEND, AS A MINIMUM, ALONG THE EXISTING UTILITY FROM ONE WALL TO THE OTHER OF THE NEW SEWER, NEW LATERAL, NEW SERVICE LINE OR NEW CULVERT TRENCH, AND ALONG THE NEW SEWER, NEW LATERAL, NEW SERVICE LINE OR NEW CULVERT AT LEAST 2 FEET ON EACH SIDE OF THE EXISTING UTILITY EXTERIOR.
31. FOR THE DURATION OF THE PROJECT, CONTRACTOR SHALL BE RESPONSIBLE TO PROTECT AND ADJUST, IF IMPACTED BY THE PROJECT, WATER MAIN VALVE CASTINGS AND BOXES, GAS MAIN VALVES AND GAS SERVICE LINE CASTINGS AND BOXES, SANITARY SEWER CASTINGS, COMBINATION SANITARY-STORMWATER CASTINGS, THERMAL CASTINGS AND BOXES, AND WATER SERVICE LINE CURB BOXES.
32. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR MAINTAINING THE REQUIRED SAFE CLEARANCE FROM OVERHEAD ELECTRICAL WIRES. ENCROACHMENT ON EXISTING EASEMENTS NOT DESIGNATED ON THE PLANS IS NOT PERMITTED UNLESS PERMISSION IS GRANTED, IN WRITING, FROM THE OWNER.

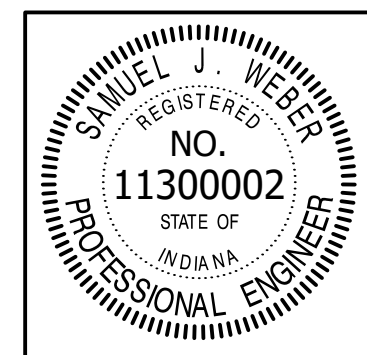
NOTE- CAUTION EXISTING UTILITIES:

THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. LOCATION, SIZE AND MATERIAL SHOWN ON UTILITIES ARE FROM AVAILABLE RECORDS AND AVAILABLE FIELD MARKINGS, SUPPLIED BY THE RESPECTIVE UTILITY COMPANY. THE INDIANA UNDERGROUND PLANT PROTECTION SERVICE (IUPPS) MUST BE NOTIFIED 48 HOURS PRIOR TO ANY EXCAVATION FOR VERIFICATION OF LOCATION, SIZE AND MATERIAL FOR EXISTING UNDERGROUND UTILITIES (1-800-382-5544 OR 811). THE CONTRACTOR SHALL PROMPTLY NOTIFY THE ENGINEER IN WRITING IF ANY UNDERGROUND STRUCTURE OR UTILITY DIFFERS MATERIALLY FROM THE CONDITIONS SHOWN ON THE PLANS AS TO IMPACT THE WORK.

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 DATE: Jun 06, 2018 - 6:24pm



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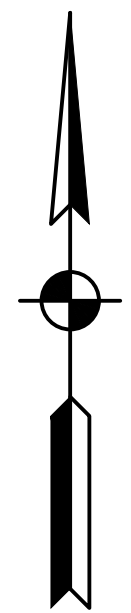
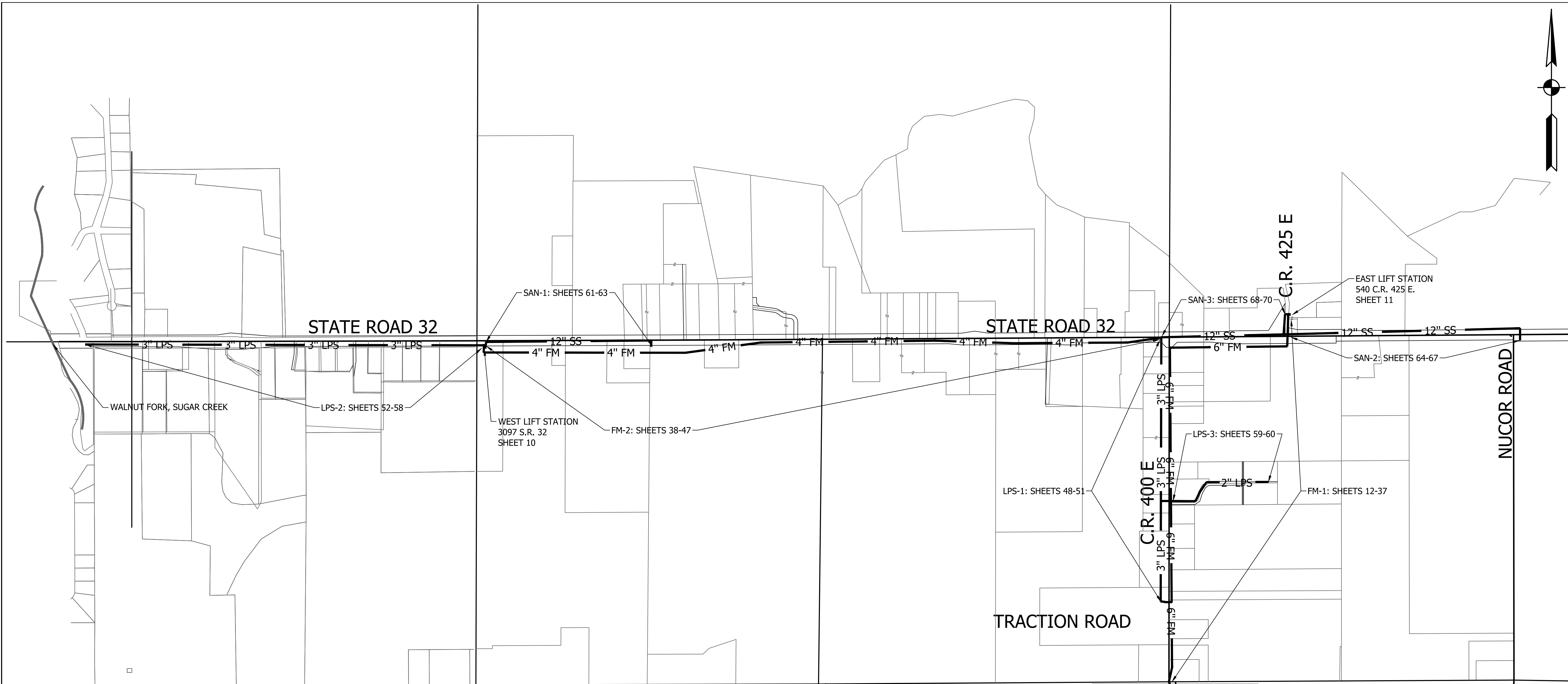


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	DESIGN ENGINEER	DATE
DESIGNED: KDK	DRAWN: KDK	
CHECKED: SJW	CHECKED: SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM	
INDEX & NOTES	

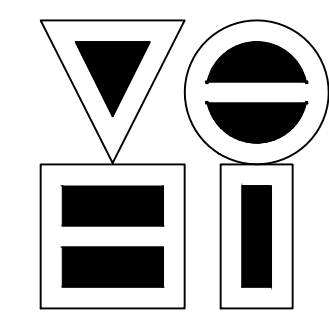
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PROJECT	15-3371

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 DATE: Jun 06, 2018 - 6:24pm



LEGEND

- 6" FM 6" FORCE MAIN
- 4" FM 4" FORCE MAIN
- 3" LPS 3" LOW PRESSURE SEWER
- 2" LPS 2" LOW PRESSURE SEWER
- 12" SS 12" GRAVITY SEWER

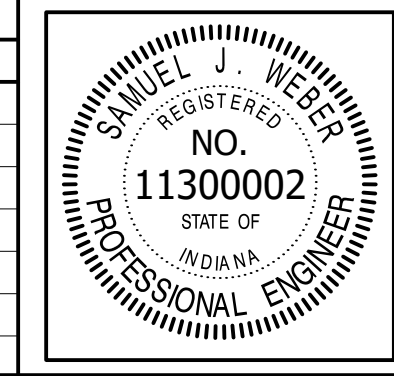


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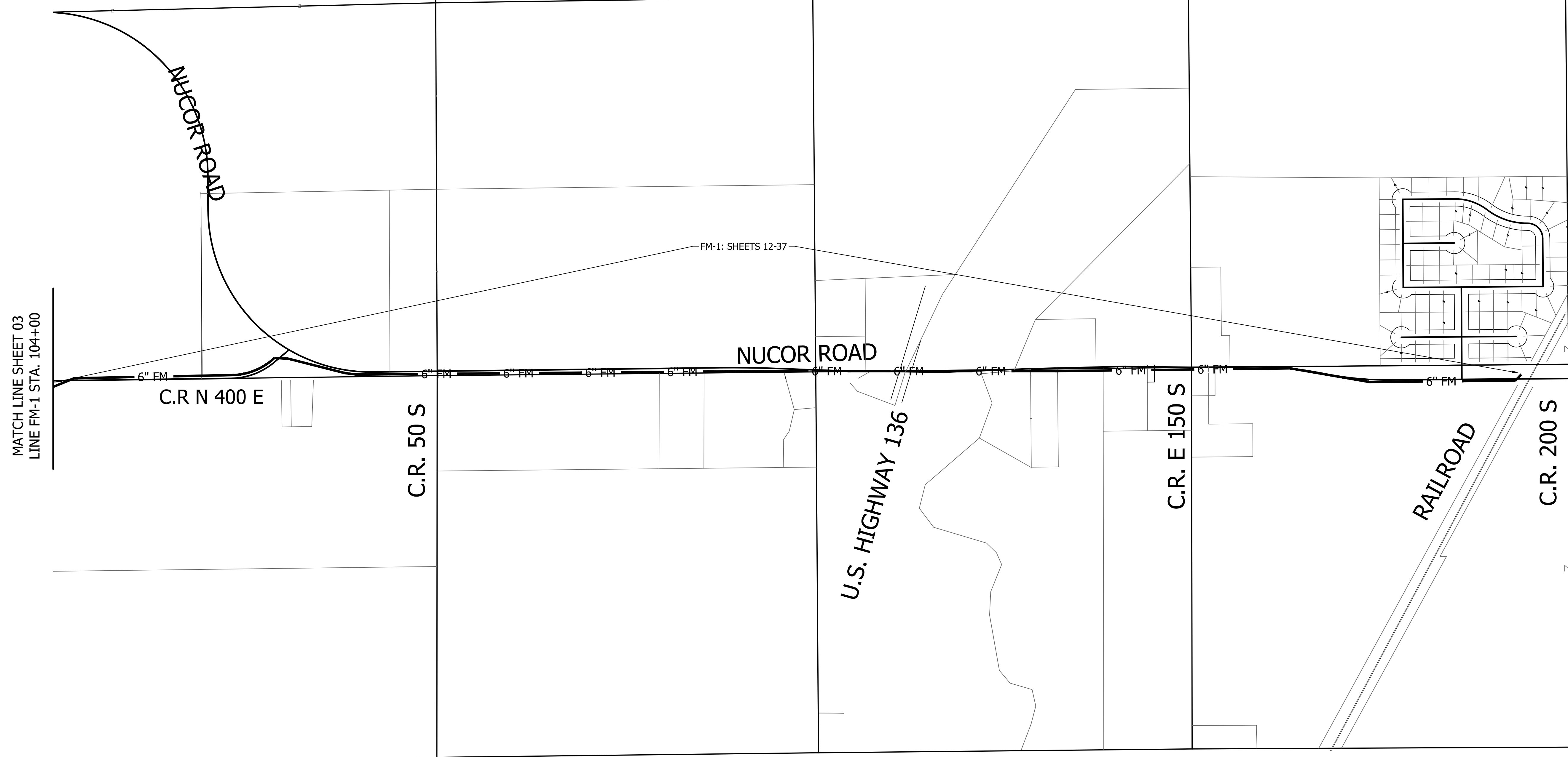
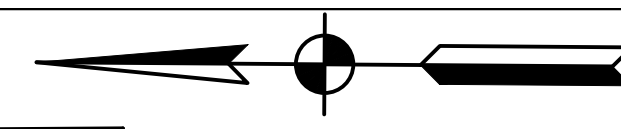


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DESIGNED: KDK	DRAWN: KDK	DATE
CHECKED: SJW	CHECKED: SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

OVERALL VIEW

HORIZONTAL SCALE	1" = 400'
VERTICAL SCALE	N/A
SHEETS	03 of 126
PROJECT	15-3371



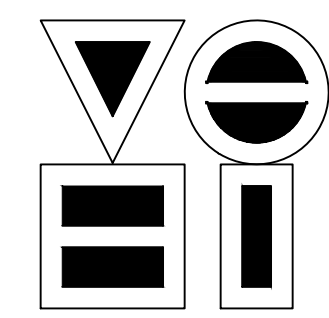
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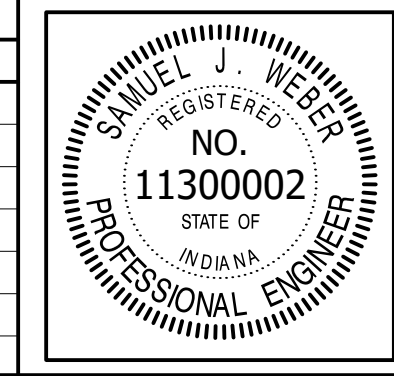
- 6" FM — 6" FORCE MAIN
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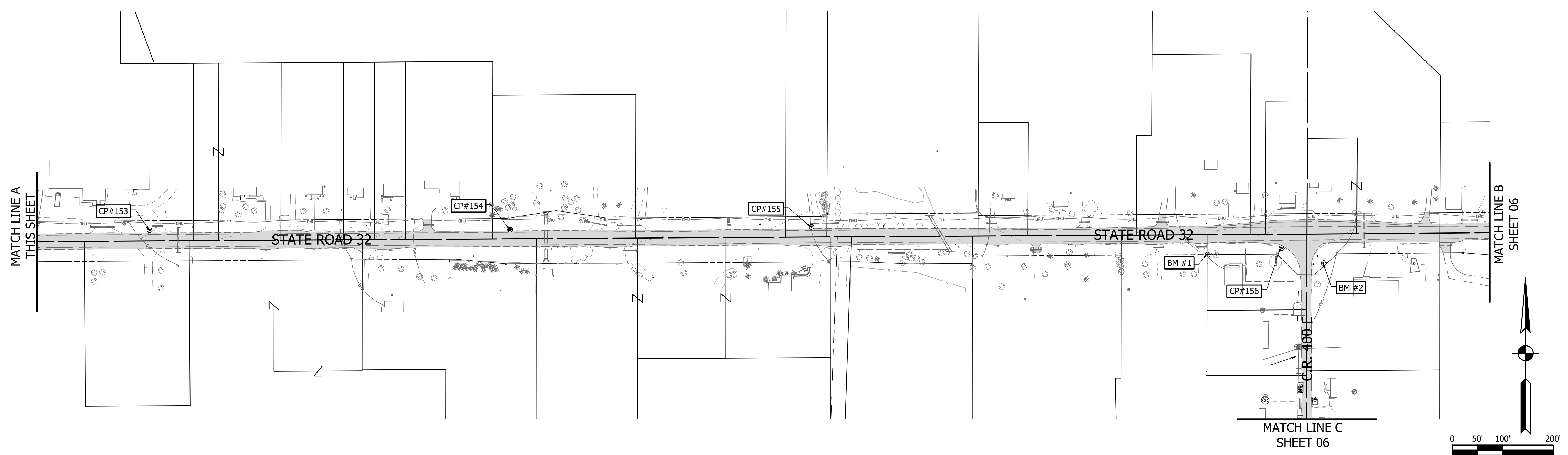
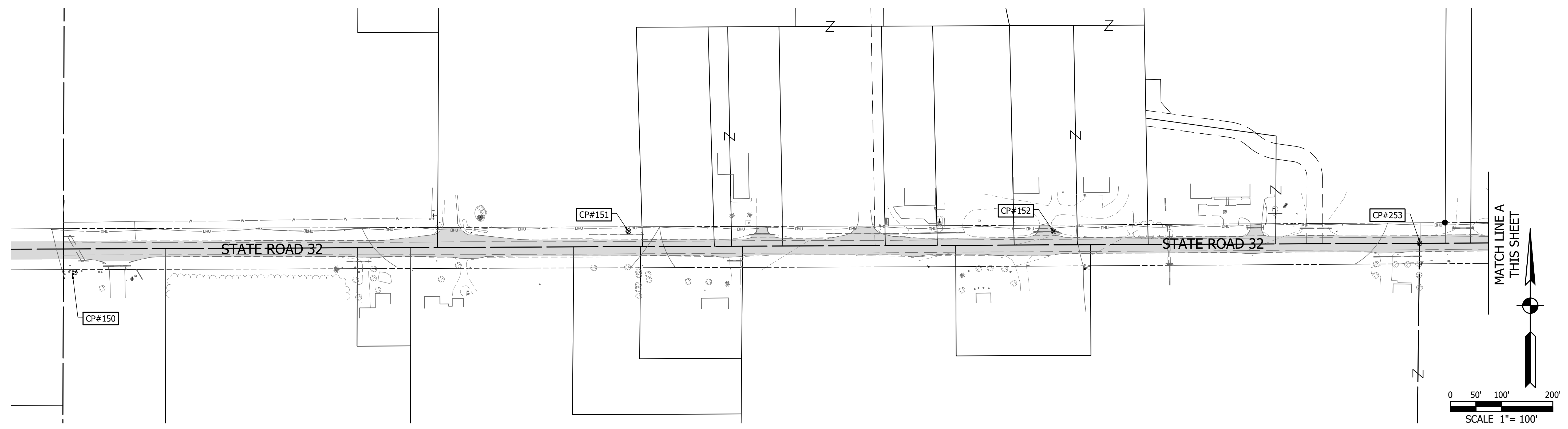
RECOMMENDED FOR APPROVAL	<i>Samuel J. Weber</i>	06/07/18
DESIGNED: KDK	DRAWN: KDK	DATE
CHECKED: SJW	CHECKED: SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

OVERALL VIEW

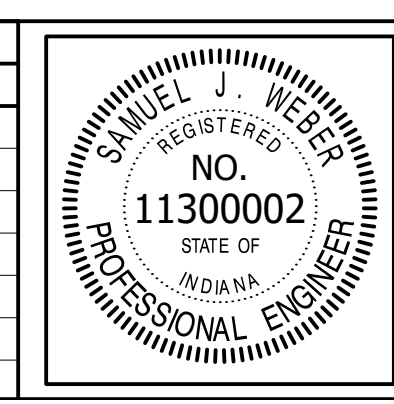
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 DATE: Jun 06, 2018 - 6:25pm



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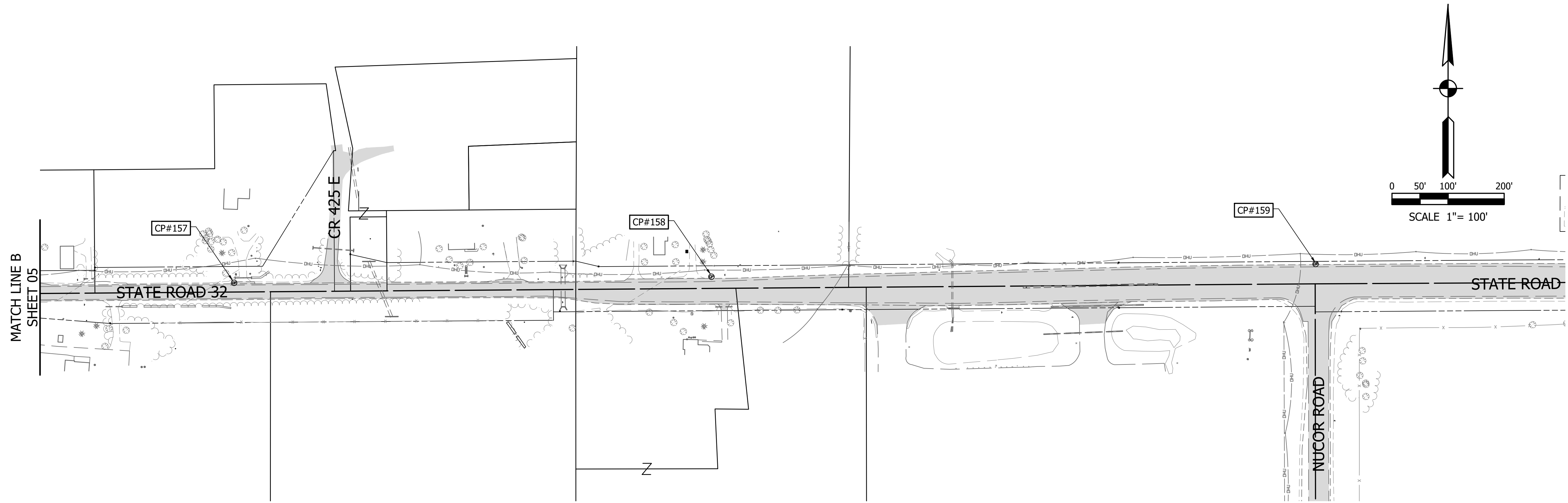
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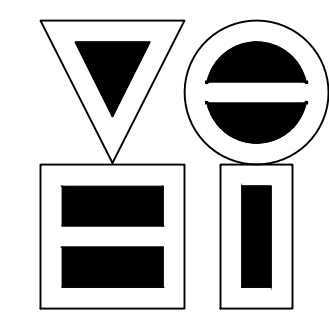
RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED:	KDK	DRAWN:
CHECKED:	SJW	CHECKED:

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
 SURVEY CONTROL EXHIBIT #1

HORIZONTAL SCALE	1"=100'
VERTICAL SCALE	N/A
SHEETS	05 of 126
PROJECT	15-3371

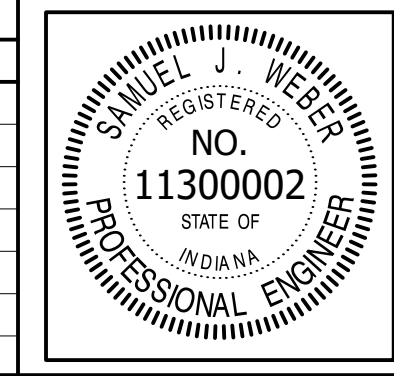


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 FILE: 15-3371 Survey Control.dwg
 DIMSCALE: 1/8"=1' LTSCALE: 0.5
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:25pm



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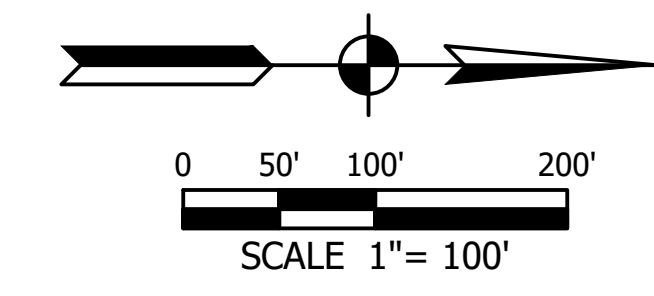
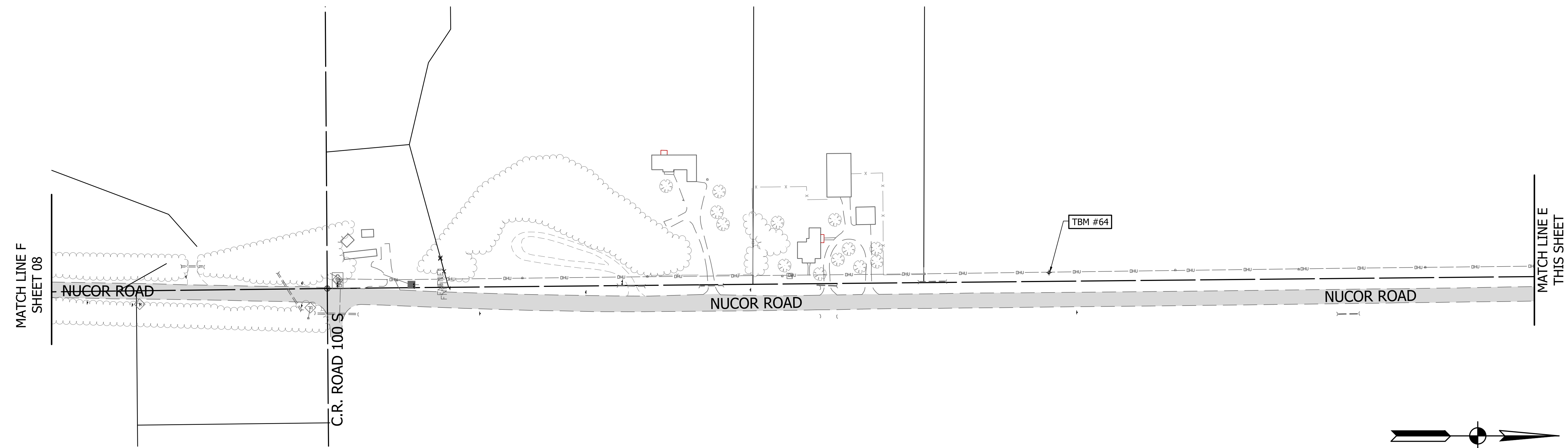
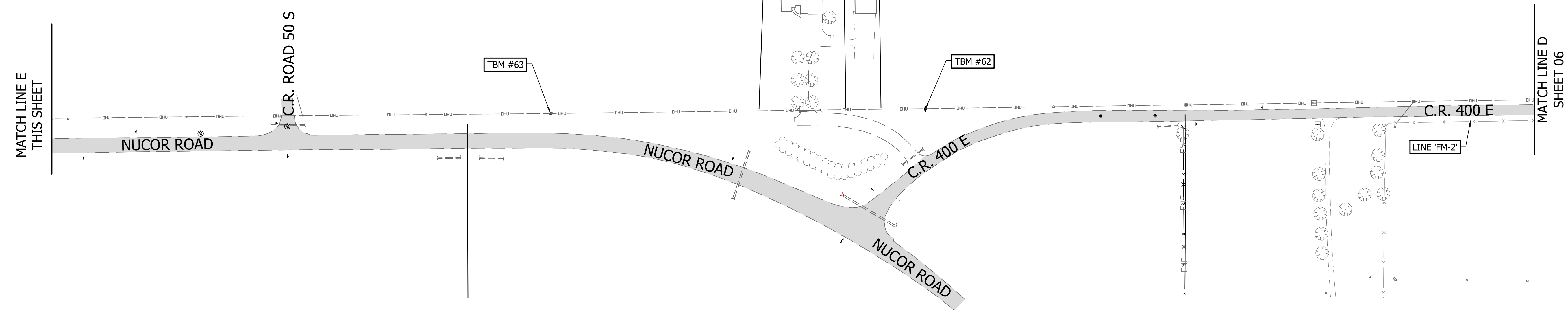
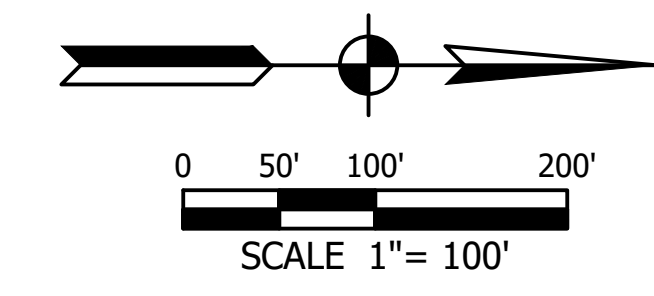
REVISIONS			
NO.	DATE	DESCRIPTION	BY



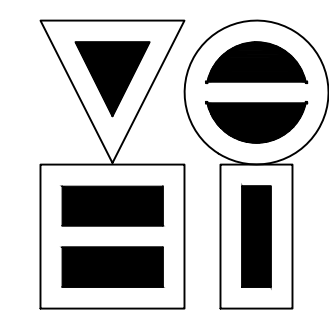
RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED:	KDK	DRAWN:
CHECKED:	SJW	CHECKED:

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
 SURVEY CONTROL EXHIBIT #2

HORIZONTAL SCALE	1"=100'
VERTICAL SCALE	N/A
SHEETS	06 of 126
PROJECT	15-3371

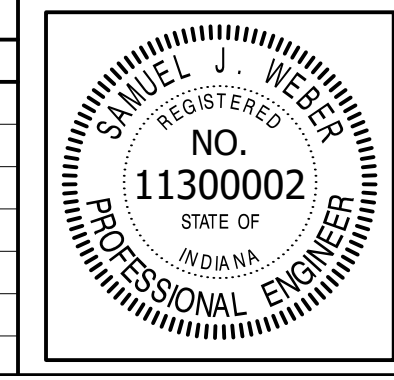


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 FILE: 15-3371 Survey Control.dwg
 DIMSCALE: 1/8"=1' LTSCALE: 0.5
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:25pm



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NO.	DATE	DESCRIPTION	BY



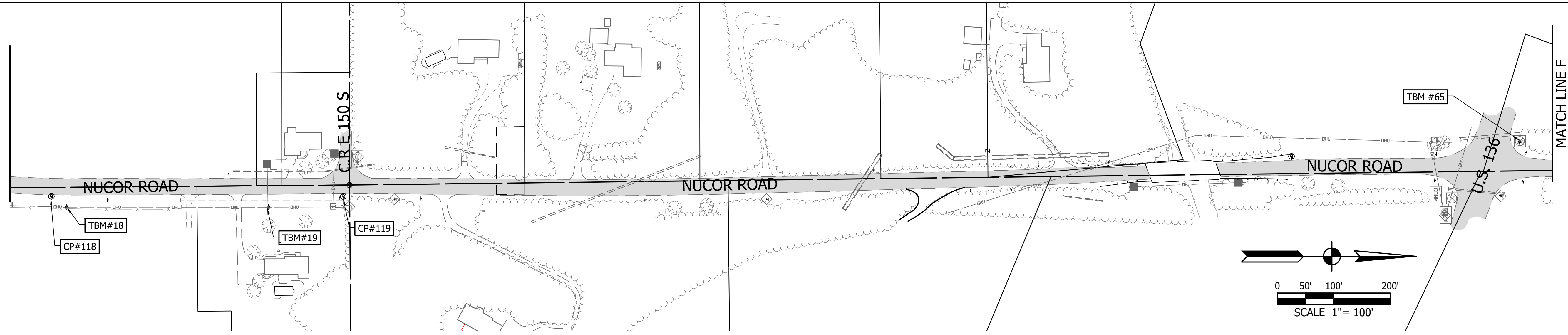
RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED:	KDK	DATE
DRAWN:	KDK	
CHECKED:	SJW	
	CHECKED: SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
 SURVEY CONTROL EXHIBIT #3

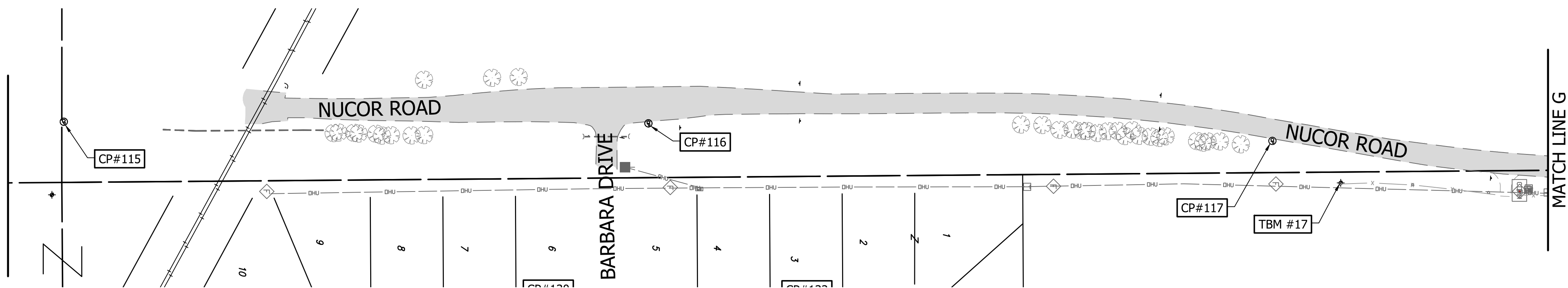
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VERTICAL SCALE	N/A
SHEETS	07 of 126
PROJECT	15-3371

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 PLOTTED BY: J.Mowery
 DATE: Jun 06, 2018 - 6:25pm

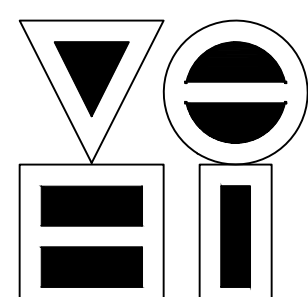
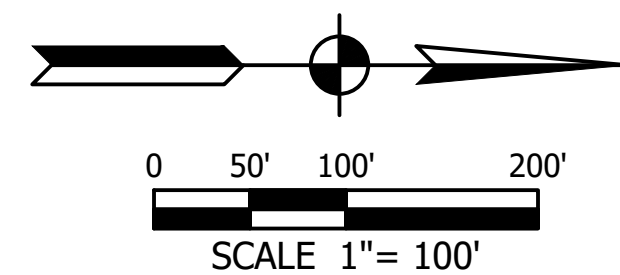
MATCH LINE G
THIS SHEET



MATCH LINE F
SHEET 07



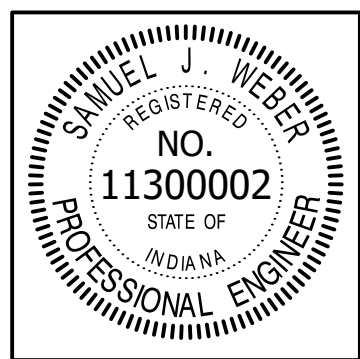
MATCH LINE G
THIS SHEET



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RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
	DESIGN ENGINEER	DATE
DESIGNED: KDK	DRAWN: KDK	
CHECKED: SJW	CHECKED: SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

SURVEY CONTROL EXHIBIT #4

HORIZONTAL SCALE	1"=100'
VERTICAL SCALE	N/A
SHEETS	08 of 126
PROJECT	15-3371

DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\01-General Sheets
 FILE: 15-3371 Survey Control.dwg
 DIMSCALE: 1/8"=1'-0"
 PLOTTED BY: J.Mowery
 DATE: Jun 06, 2018 - 6:25pm

TEMPORARY BENCH MARK TABLE		
Station	Elevation	DESCRIPTION
BM 1	813.10	NGS BM Q 111 Reset 1961, S. side of SR 32 ±200 W. of CR 400 E.
BM 2	816.48	INDOT BM MONT C-6 in SE. Quad. Of SR 32 & CR 400 E.
TBM 59	818.34	Railroad Spk in W. side of PP #500-983 on E side CR 400 E. 7' south of mailbox #223
TBM 60	825.22	Railroad spile on E. side on PP #30A-209-659 in NW quadrant of CR 400 E and Traction Rd.
TBM 61	829.29	Cut Square on NE. concrete collar for 34" x 48" CMP on NW. side of Nucor Road approx. 0.8 mile S. of SR 32
TBM 62	823.03	Railroad spike set in E. side of PP No. 500-158, approx. 75' W. of Drive to 289 S. 400 E.
TBM 63	821.07	Railroad spike set in E. side of PP (no #), on W. side of Nucor Road, approx. 500' N. of County Road 50 South
TBM 64	832.04	Railroad spike set in E. side of PP No. 500-147 on W. side of Nucor Road, approx. 1,500' S. of County Road 50 South
TBM 65	770.60	Cut X on E. base bolt of strain pole at NW corner of Nucor Road and US 136
TBM 17	836.40	Boat Spk. In W. side of PP No. 209-836, 75' E. of Nucor Rd. & 2000' N. of CR 200 S
TBM 18	834.46	RR Spk in W. side of PP No. 209-837, 45' E. of Nucor Rd. & 600' S. of CR 150 S
TBM 19	825.99	Boat Spk in W. side of PP No. 213-026, 45' E. of Nucor Rd. & 150' S. of CR 150 S.
TBM 31	817.41	SW cor concrete porch, House No. 4184 Chigger Hollow Drive

CONTROL POINT TABLE				
Point #	Elevation	Northing	Easting	Description
59	818.34	274358.77	669182.41	CPTTBM
60	825.22	273210.54	669145.10	CPTTBM
115	825.71	262484.57	669247.30	CAPPED REBAR SET
116	830.00	263289.82	669249.49	CAPPED REBAR SET
117	835.16	264149.30	669273.71	CAPPED REBAR SET
118	835.17	264602.51	669329.48	CAPPED REBAR SET
119	820.54	265119.84	669329.68	CAPPED REBAR SET
130	831.72	263212.19	669540.88	MAG NAIL SET
131	821.94	262809.79	669515.60	MAG NAIL SET
132	827.98	263621.06	669548.45	CAPPED REBAR SET
138	826.49	263655.52	670180.95	MAG NAIL SET
139	818.71	263289.68	670169.77	MAG NAIL SET
145	828.18	263654.65	669868.81	MAG NAIL SET
150	779.62	275717.79	663886.30	CAPPED REBAR SET
151	792.01	275797.93	664967.10	CAPPED REBAR SET
152	794.48	275797.55	665796.95	CAPPED REBAR SET
153	798.13	275797.59	666869.63	CAPPED REBAR SET
154	797.57	275798.82	667584.81	CAPPED REBAR SET
155	797.79	275804.45	668182.76	CAPPED REBAR SET
156	814.76	275762.07	669115.86	CAPPED REBAR SET
157	800.36	275811.74	669875.30	MAG NAIL SET
158	801.40	275822.69	670726.17	CAPPED REBAR SET
159	814.36	275845.35	671803.21	CAPPED REBAR SET
160	811.05	275843.99	672542.84	MAG NAIL SET
161	837.95	274848.92	671779.23	CAPPED REBAR SET
162	833.84	273493.02	671783.80	CAPPED REBAR SET
163	774.80	276067.00	663583.53	CAPPED REBAR SET
253	797.38	275774.40	666511.15	SPIKE NAIL SET
254	835.31	273163.62	671806.25	SPIKE NAIL SET
463	815.62	275163.93	669178.81	CPTTBM
464	816.52	274616.72	669146.31	CPTCRBS
465	817.09	274298.66	669142.97	CPTCRBS
466	817.97	273709.12	669177.81	CPTCRBS
467	825.58	273108.07	669159.42	CPTCRBS

HORIZONTAL AND VERTICAL INFORMATION

Horizontal Datum

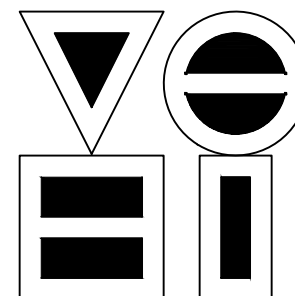
The coordinate system for this project is a local grid system derived from NAD83(2007). The coordinate system is defined by the following parameters:

Central Meridian - 86°52'30" West
 Scale Factor - 1.0000319 (along Central Meridian)
 Latitude of Origin - 39°28'12" North
 False Easting - 656,166,667 USft. (200,000,000 m)
 False Northing - 656,166,667 USft. (200,000,000 m)

Control Points 99 - 141, 145, & 150 were observed using the InCORs Real-Time Network maintained by INDOT. Multiple observations were taken and checked for consistency, then averaged to compute final coordinates. All other points were tied to these control points through GPS and/or total station observations. Unless shown otherwise all distances are in US Survey Feet and decimal parts thereof.

Vertical Datum

The vertical datum for this project is the North American Vertical Datum of 1988 (NAVD88). NGS benchmark G 75 was recovered in good condition at the northwest corner of County Road 500 South and County Road 550 East. Another NGS benchmark, Q 111 RESET was recovered in good condition west of the intersection of State Road 32 and County Road 400 East. The two benchmarks were tied together through multiple level runs over approximately 8 miles and agreed ± 0.1'. All level circuits were performed to at least third order accuracy with an allowable error of $\pm 12 \text{ mm} \times \sqrt{K}$; where K is the length of the circuit in kilometers. Temporary benchmarks were set along the route at intervals of approximately 1500 feet for easy retrieval during construction.

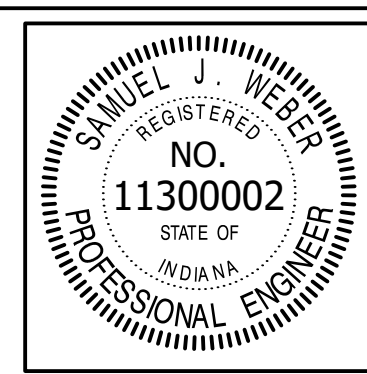


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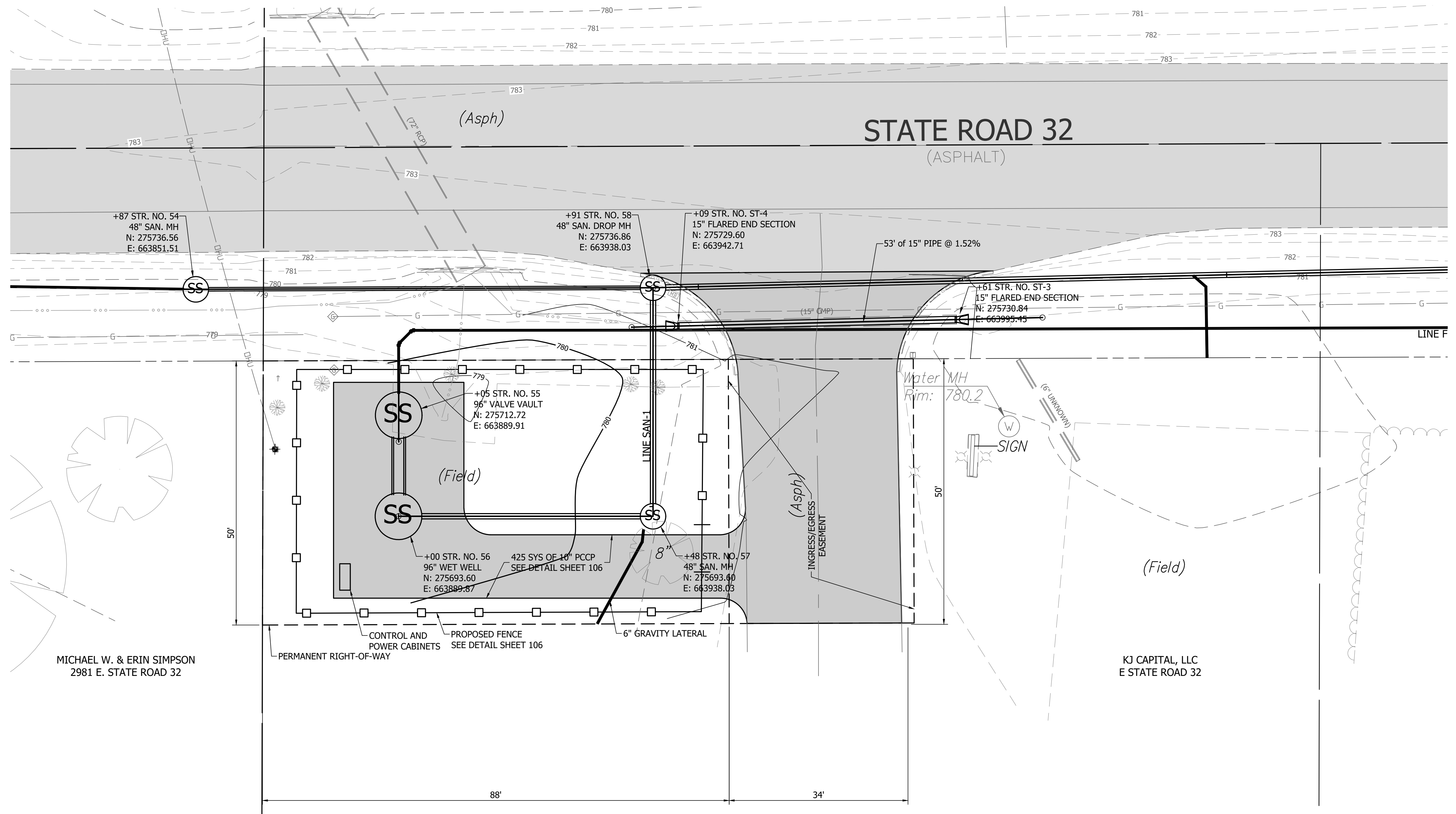
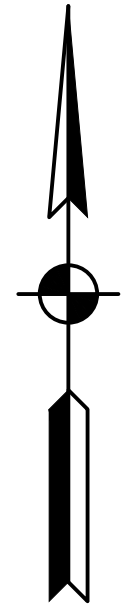
REVISIONS			
NO.	DATE	DESCRIPTION	BY



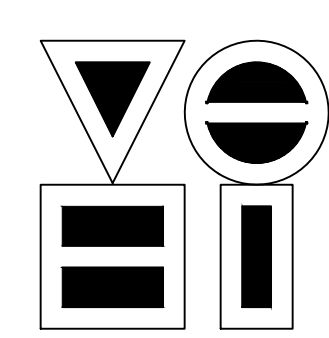
RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED:	KDK	DATE
DRAWN:	KDK	
CHECKED:	SJW	
	SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM	
SURVEY CONTROL NOTES	

HORIZONTAL SCALE	N/A
VERTICAL SCALE	N/A
SHEETS	09 of 126
PROJECT	15-3371

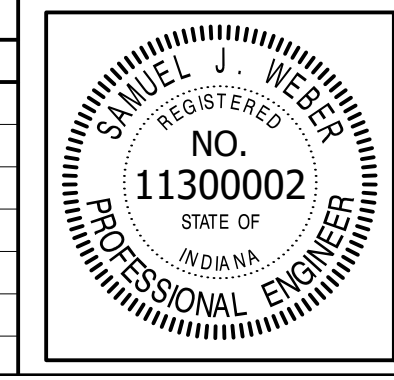


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 FILE: 15-3371 West LS Site Plan.dwg
 DIMSCALE: 1/8" = 1'-0"
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:26pm



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NO.	DATE	DESCRIPTION	BY

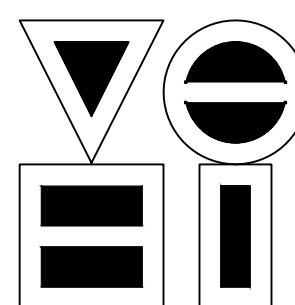
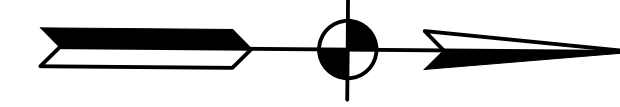
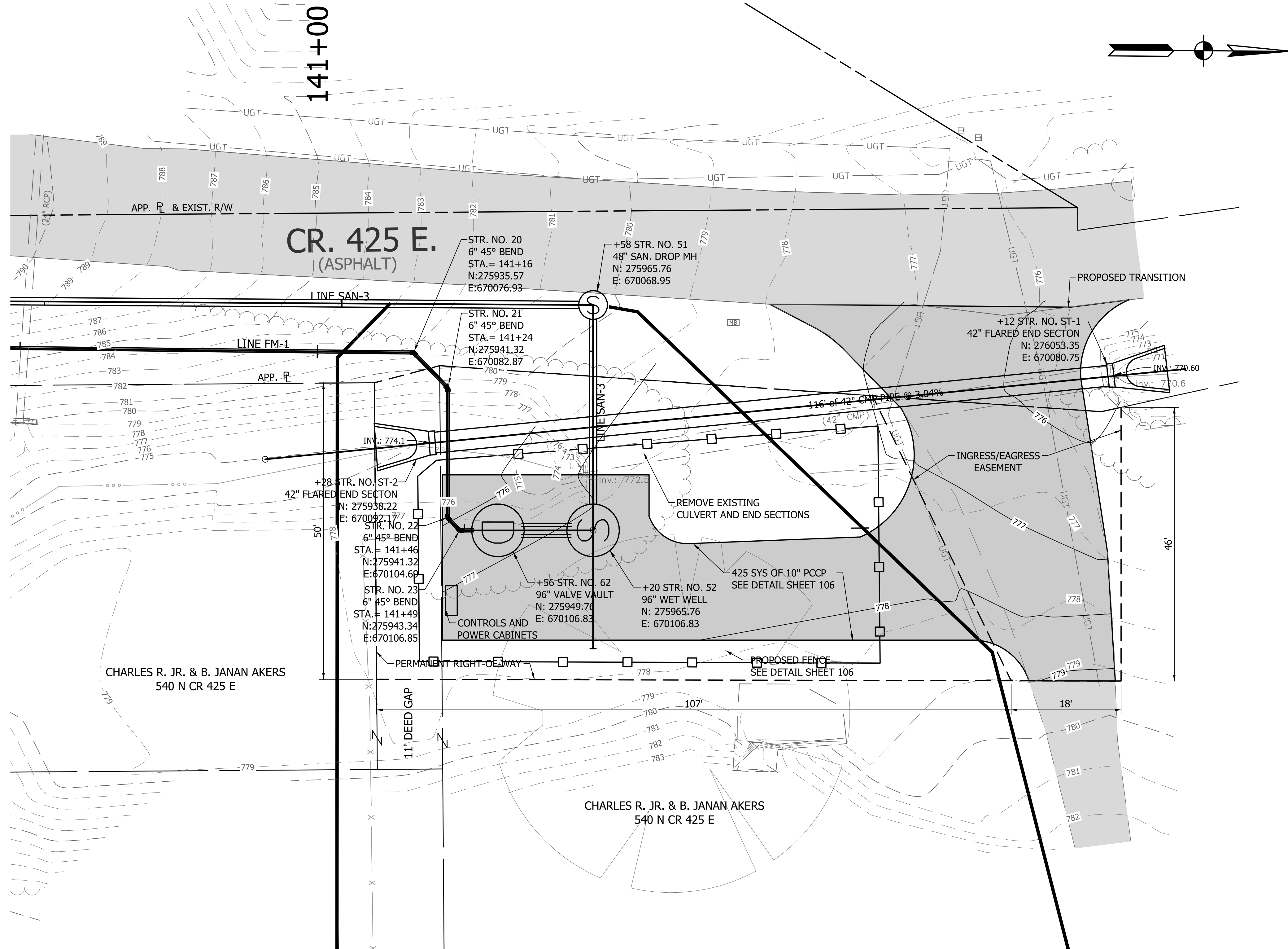


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CHECKED:	SJW	CHECKED:

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
 WEST LIFT STATION - 3097 S.R. 32
 SITE PLAN

HORIZONTAL SCALE	1" = 10'
VERTICAL SCALE	N/A
SHEETS	10 of 126
PROJECT	15-3371

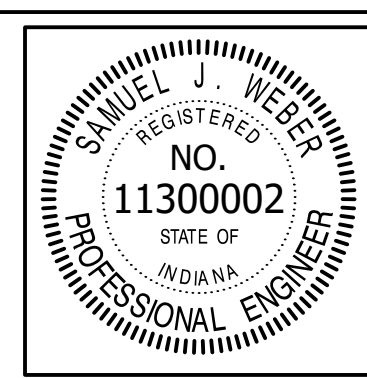
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 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:27pm



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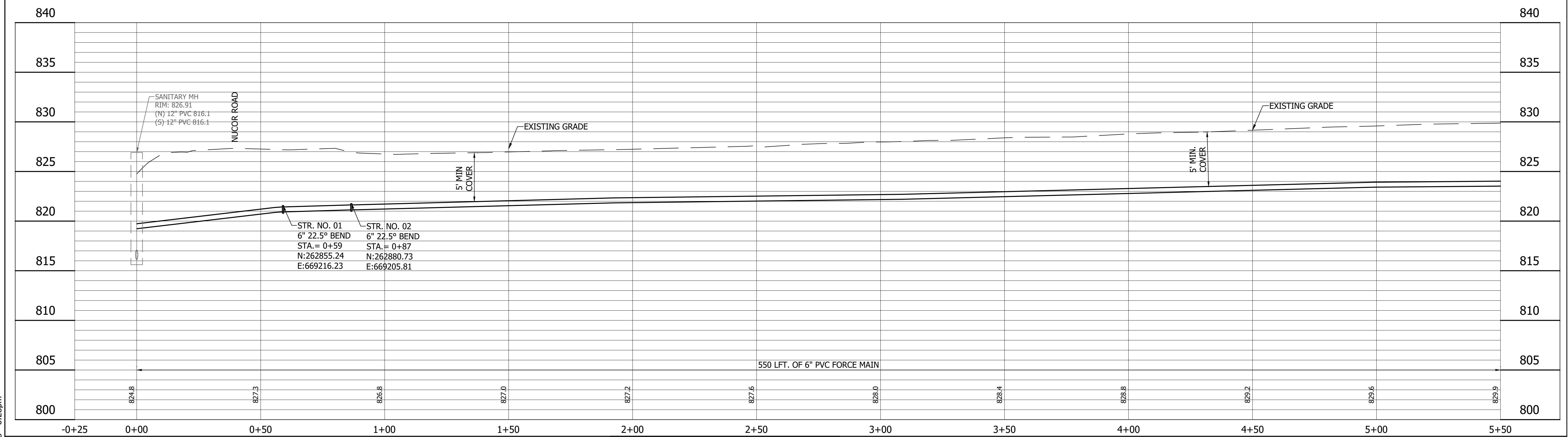
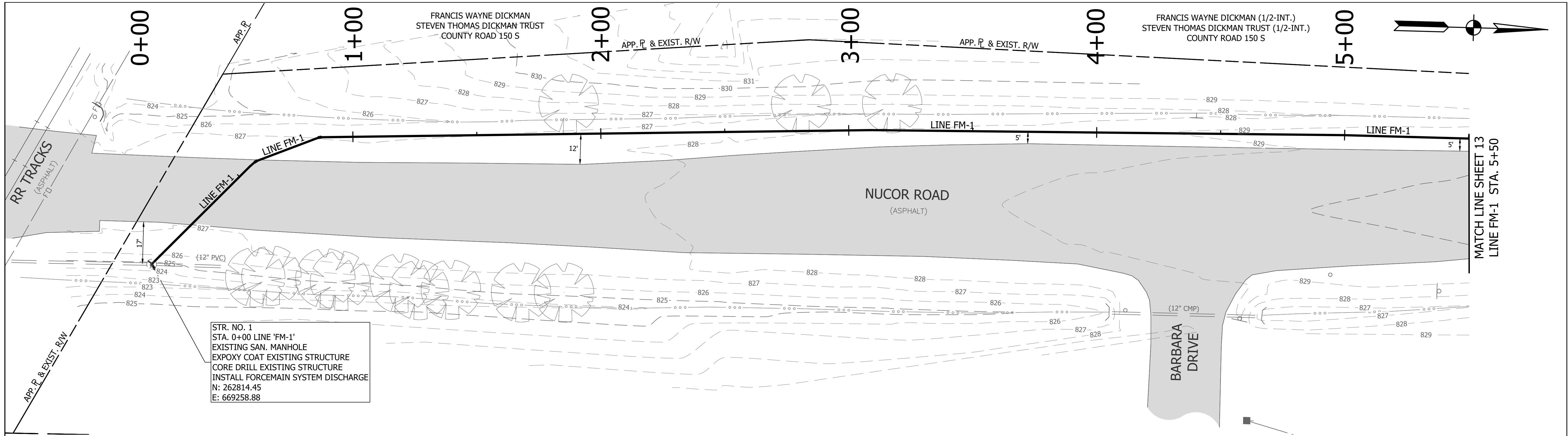
REVISIONS			
NO.	DATE	DESCRIPTION	BY



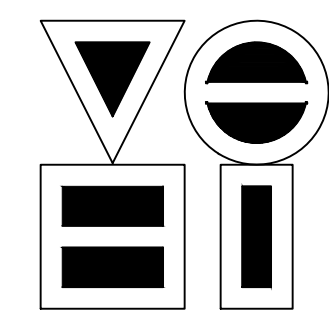
RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED: KDK	DRAWN: KDK	DATE
CHECKED: SJW	CHECKED: SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM	
EAST LIFT STATION - 540 C.R. 425 E.	
SITE PLAN	

HORIZONTAL SCALE	1" = 10'
VERTICAL SCALE	N/A
SHEETS	
11	of 126
PROJECT	
15-3371	

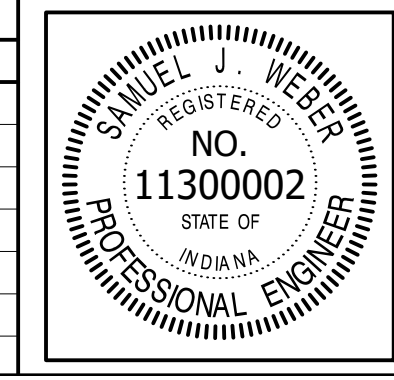


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 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:28pm



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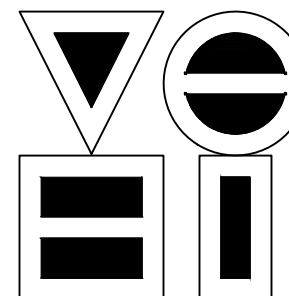
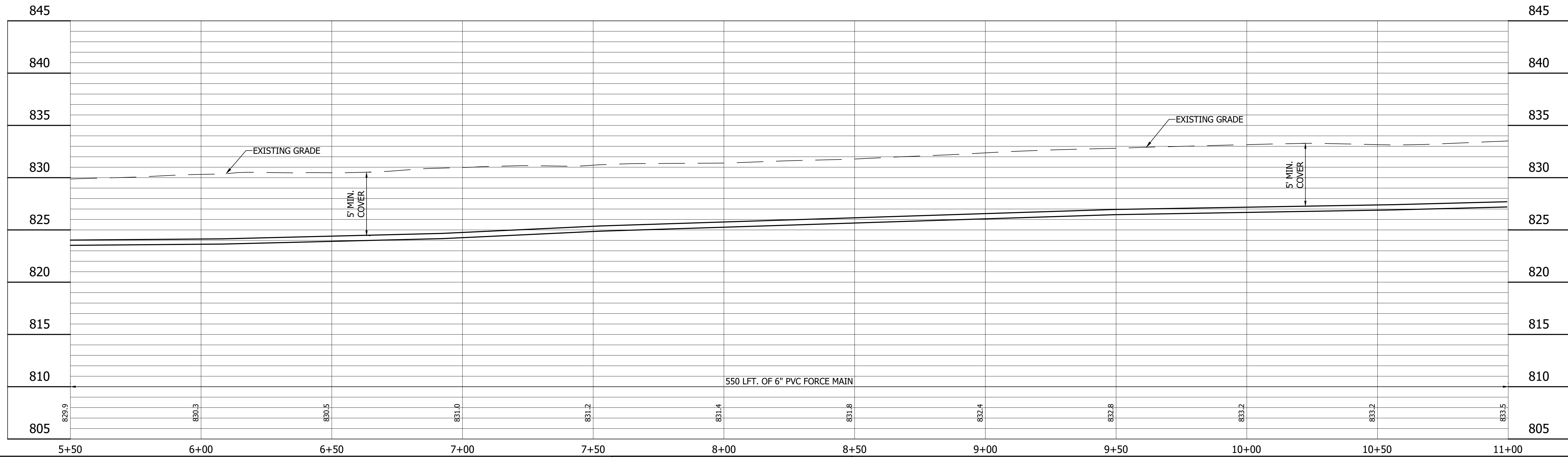
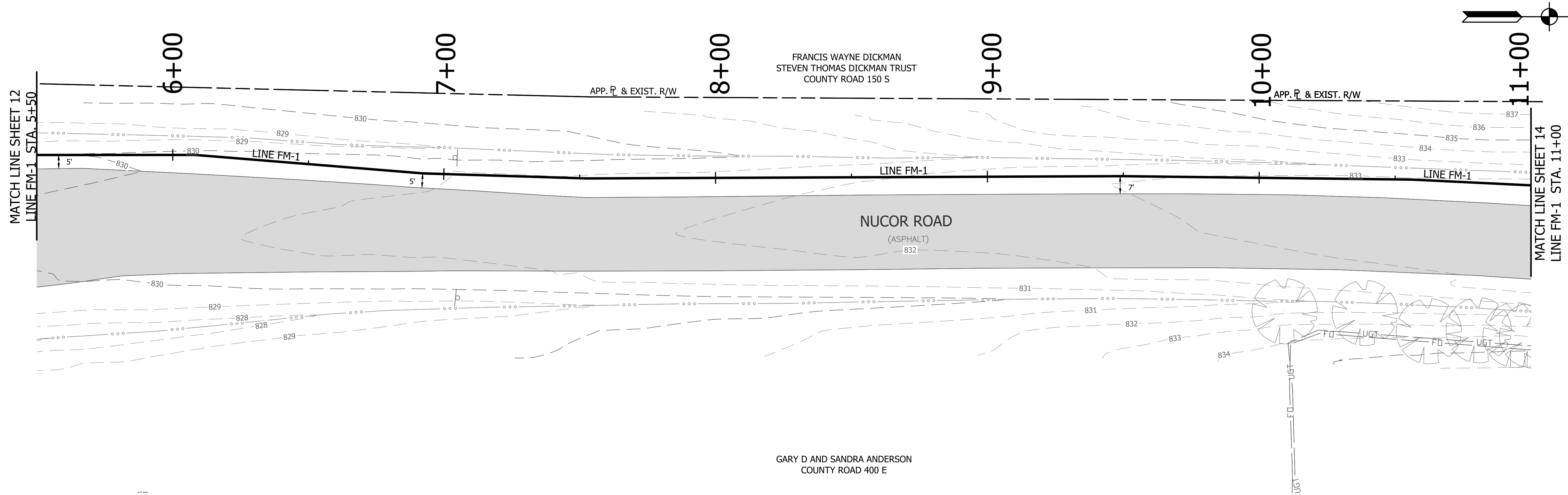


RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
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CHECKED:	SJW	CHECKED:

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
FORCE MAIN - LINE FM-1
PLAN/PROFILE

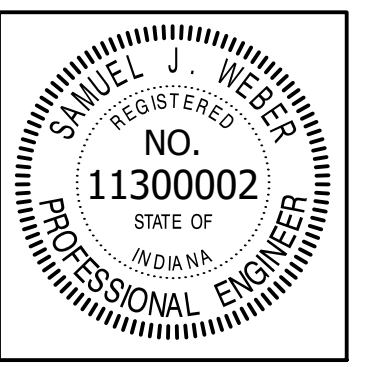
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VERTICAL SCALE	1" = 5'
SHEETS	12 of 126
PROJECT	15-3371

DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\03-Plan and Profiles\
 FILE:PP LINE FM-1-01.dwg
 DIMSCALE: 1" = 20'
 PLOTTED BY: J.Mowery
 DATE: Jun 06, 2018 - 6:28pm



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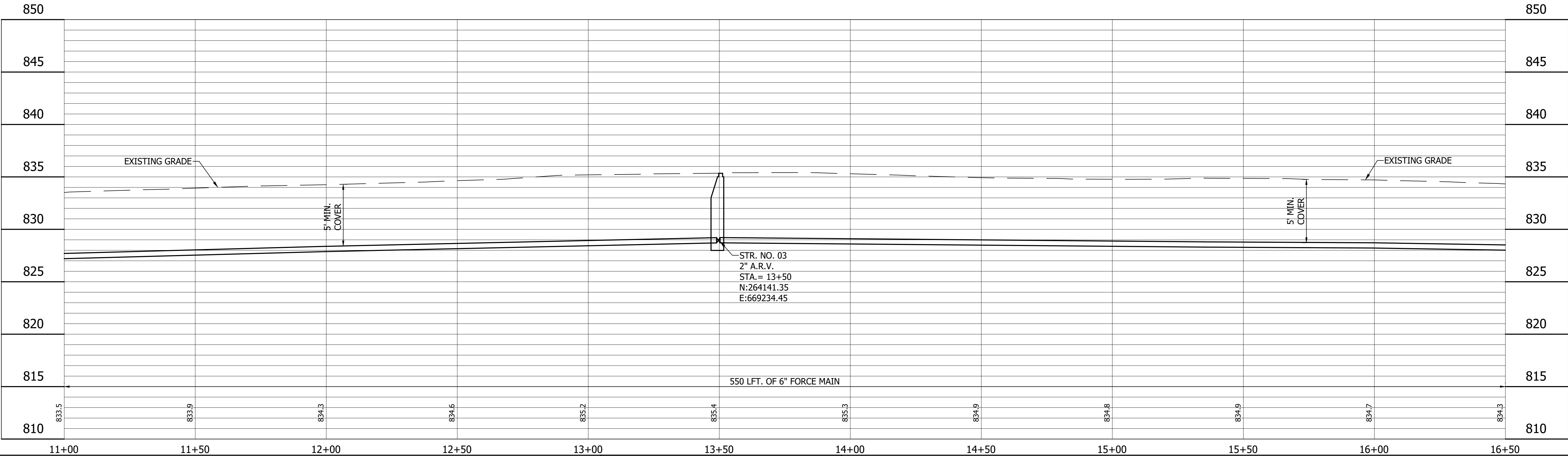
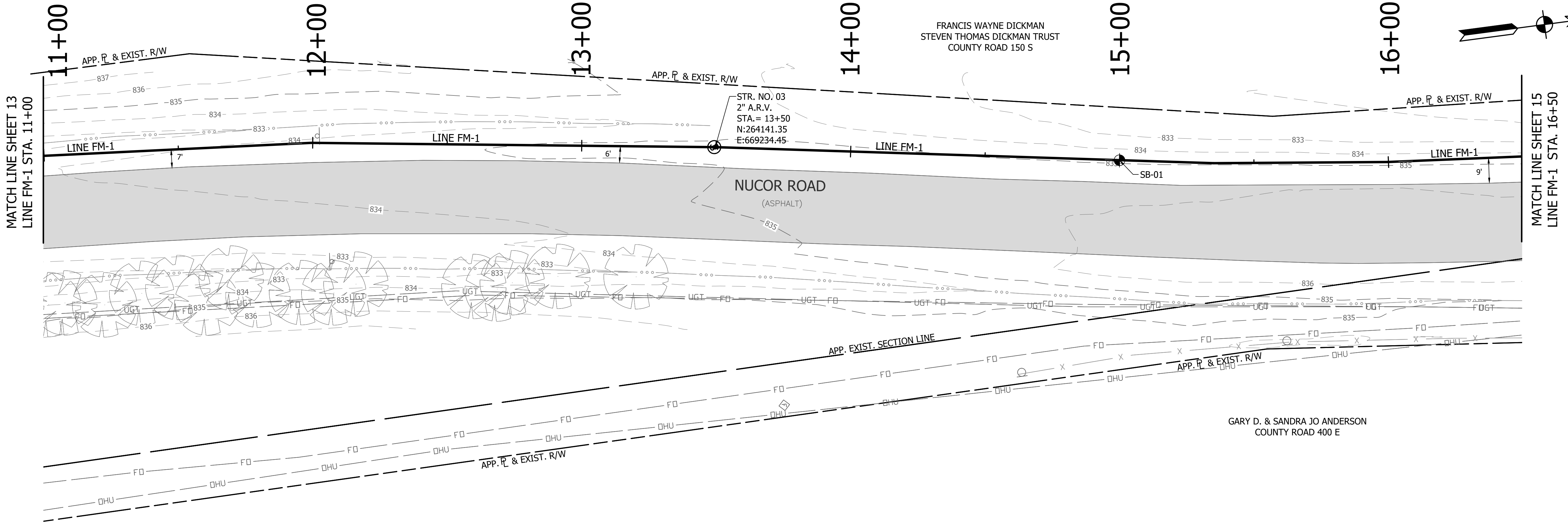
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NO.	DATE	DESCRIPTION	BY



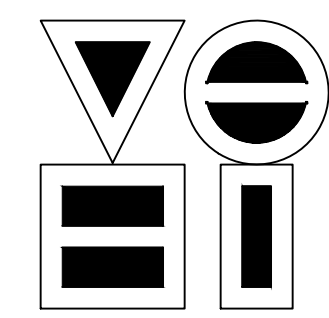
RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED:	KDK	DRAWN:
CHECKED:	SJW	CHECKED:

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
FORCE MAIN - LINE FM-1
PLAN/PROFILE

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	13 of 126
PROJECT	15-3371

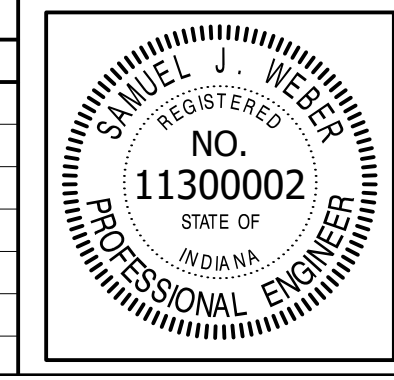


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 PLOTTED BY: JMooney
 DATE: Jun 06, 2018 - 6:28pm



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REVISIONS			
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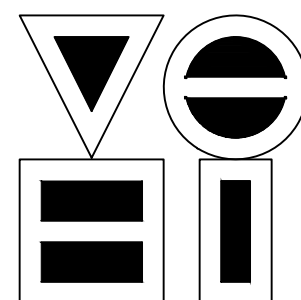
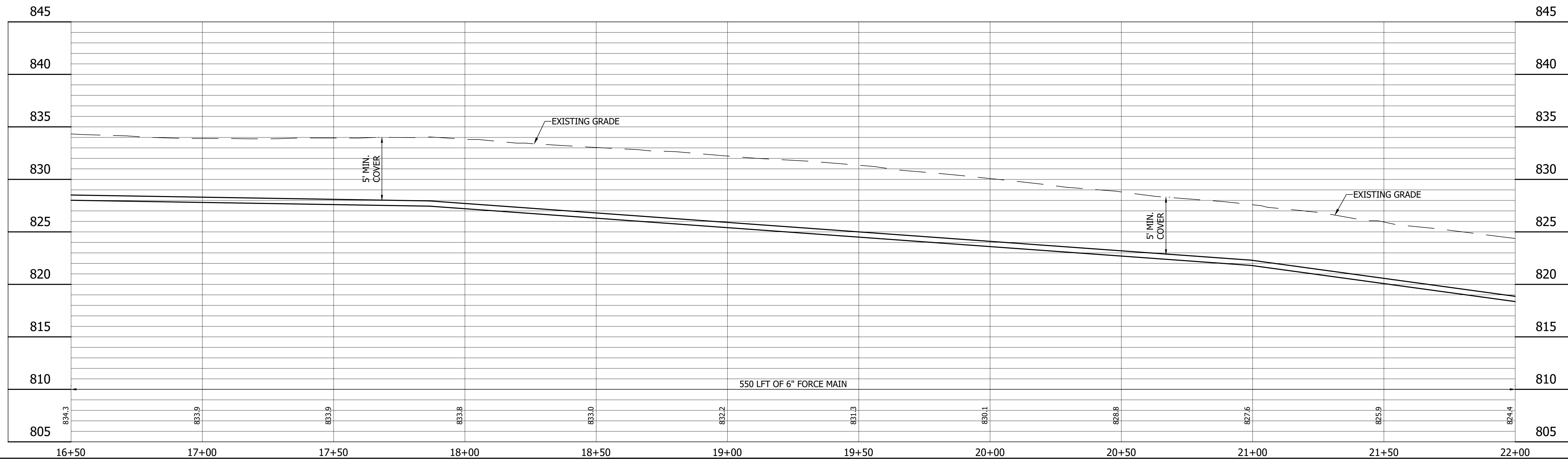
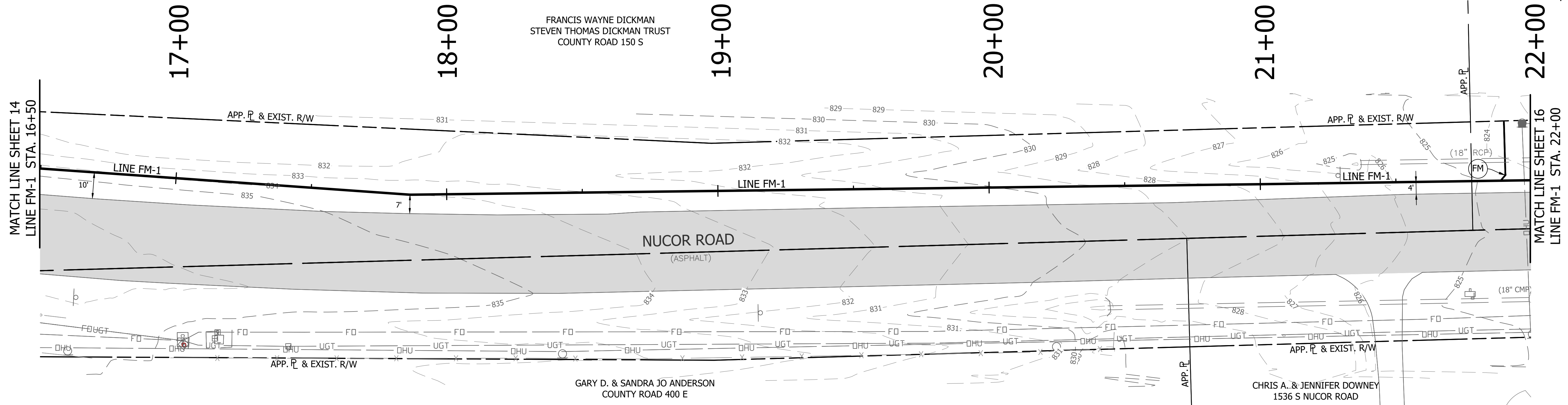


RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED:	KDK	DATE
DRAWN:	KDK	
CHECKED:	SJW	
CHECKED:	SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
FORCE MAIN - LINE FM-1
PLAN/PROFILE

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	14 of 126
PROJECT	15-3371

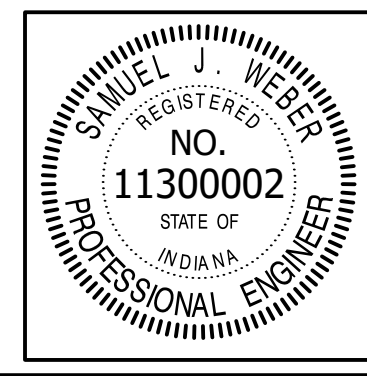
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 FILE:PP LINE FM-1-01.dwg
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 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:29pm



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REVISIONS			
NO.	DATE	DESCRIPTION	BY

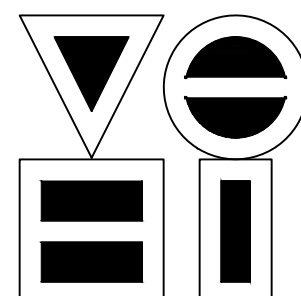
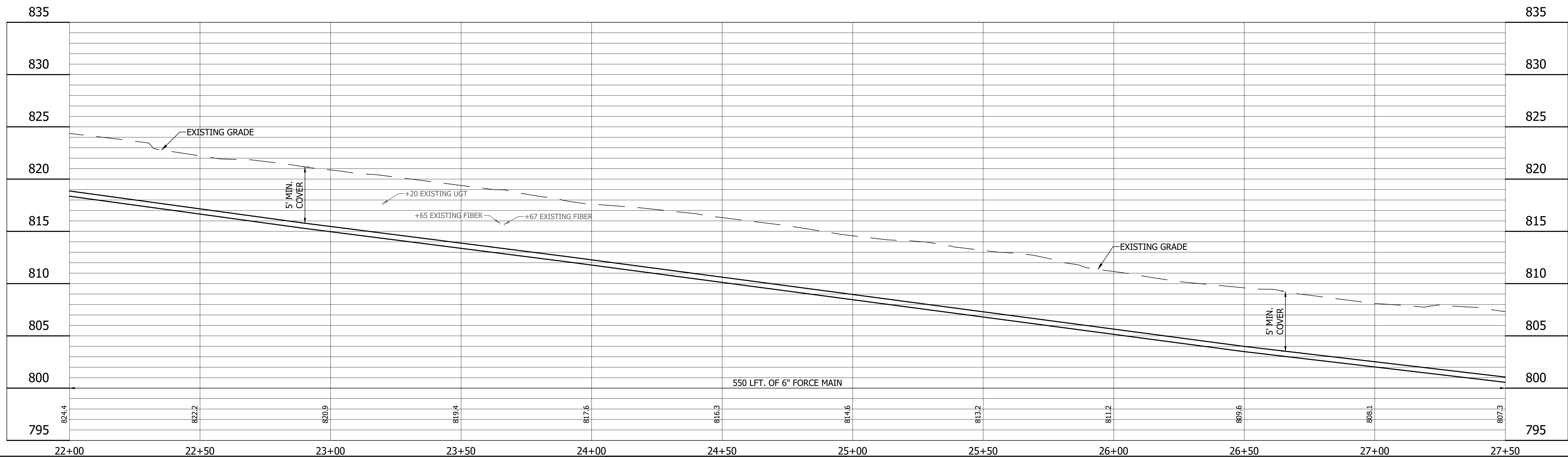
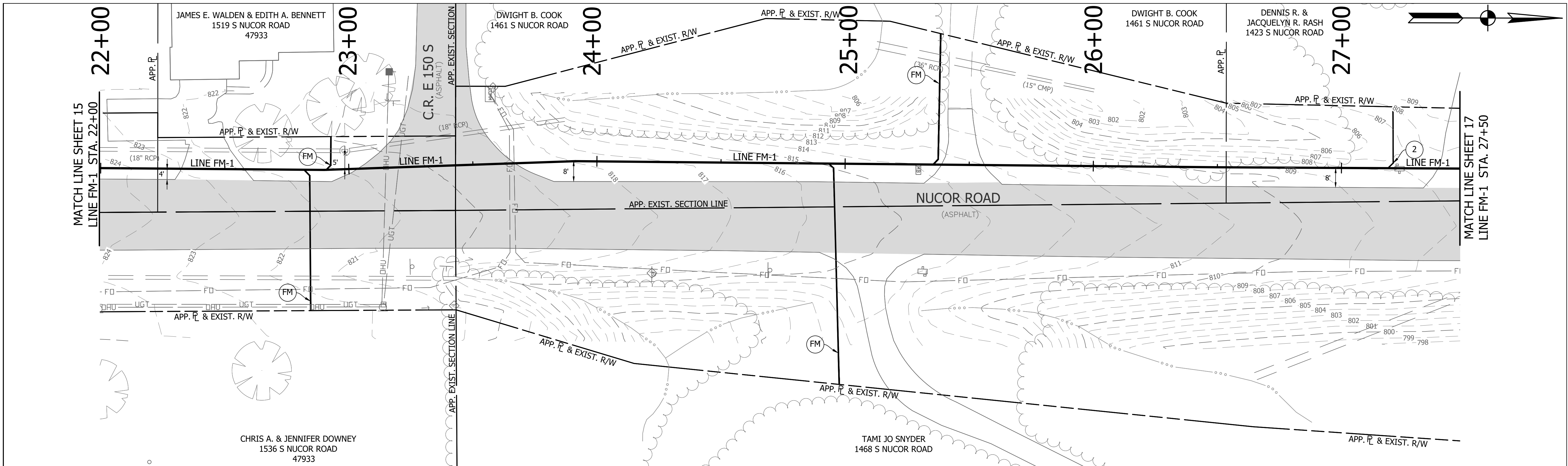


RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED:	KDK	DATE
DRAWN:	KDK	
CHECKED:	SJW	
	SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
FORCE MAIN - LINE FM-1
PLAN/PROFILE

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	15 of 126
PROJECT	15-3371

DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\03-Plan and Profiles
 FILE: PP LINE FM-1-01.dwg
 DIMSCALE: 1/4" = 1' LTSCALE: 20
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:29pm

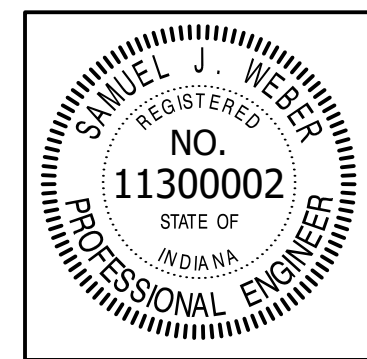


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Indianapolis, Indiana 46254
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NO.	DATE	DESCRIPTION	BY



RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED:	KDK	DRAWN:
CHECKED:	SJW	CHECKED:

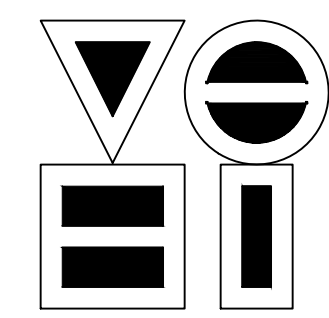
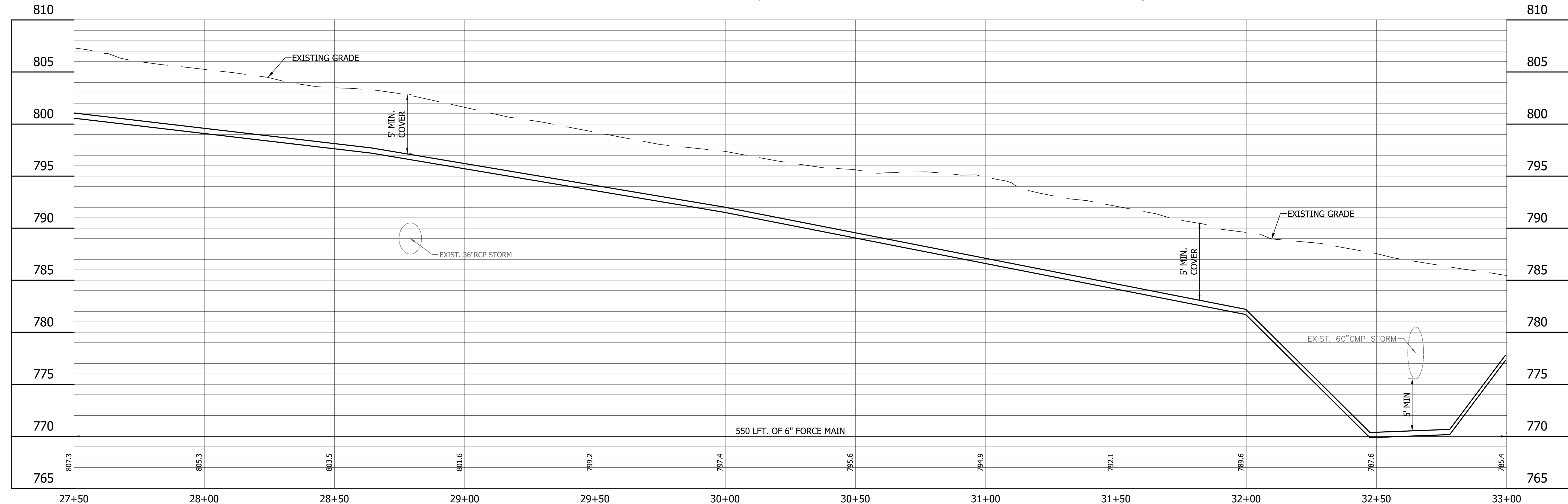
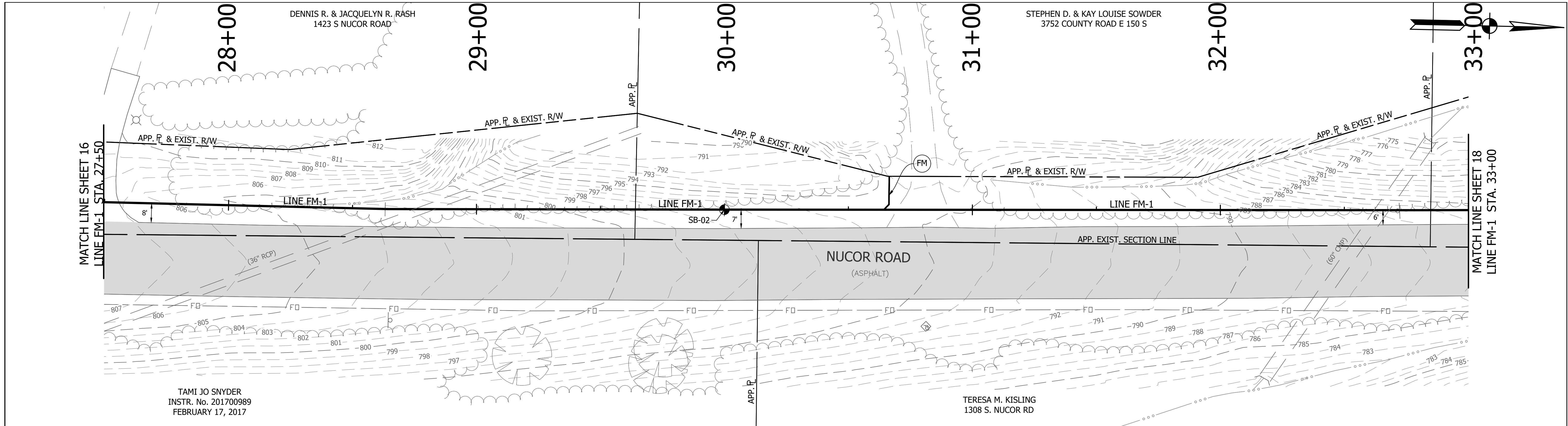
S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

FORCE MAIN - LINE FM-1

PLAN/PROFILE

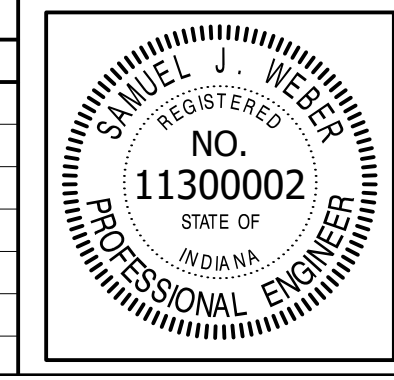
HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	16 of 126
PROJECT	15-3371

DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\03-Plan and Profiles
 FILE: PP_LINE FM-1.dwg
 DIMSCALE: 1/4" = 1' LTSCALE: 20
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:29pm



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REVISIONS			
NO.	DATE	DESCRIPTION	BY

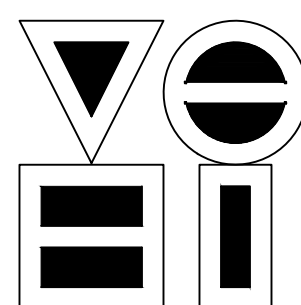
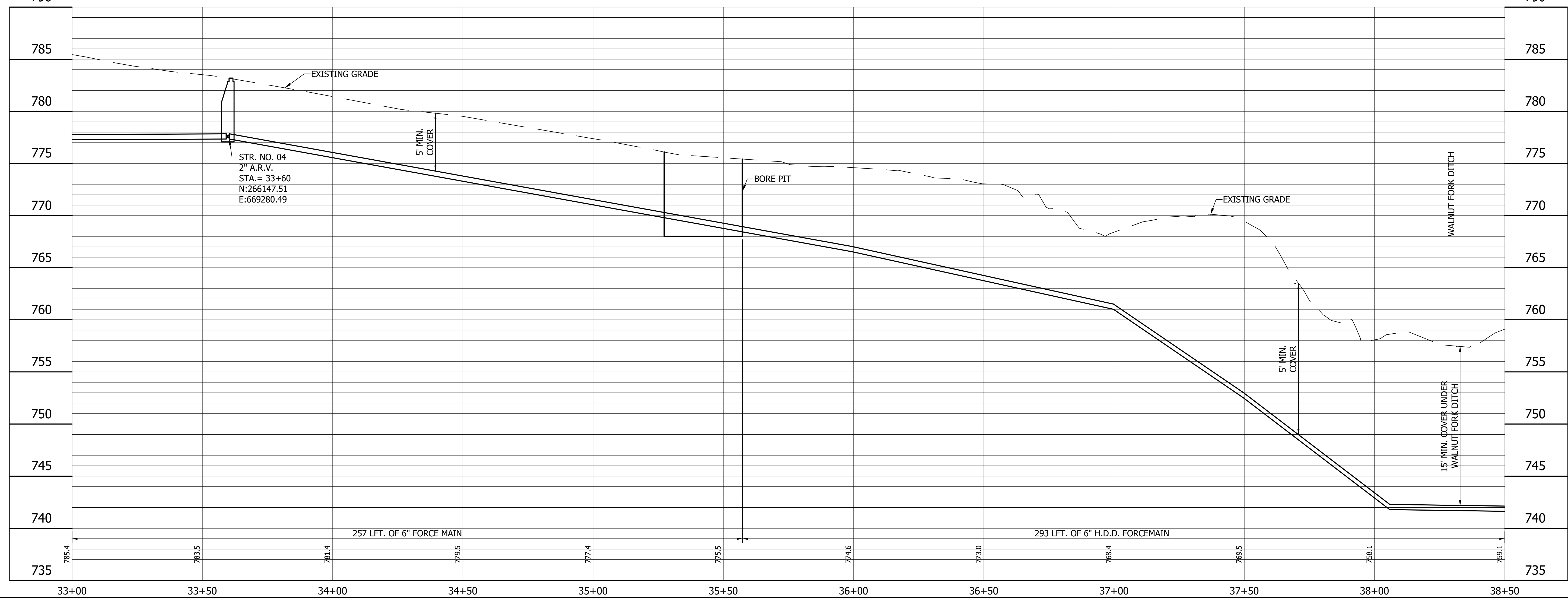
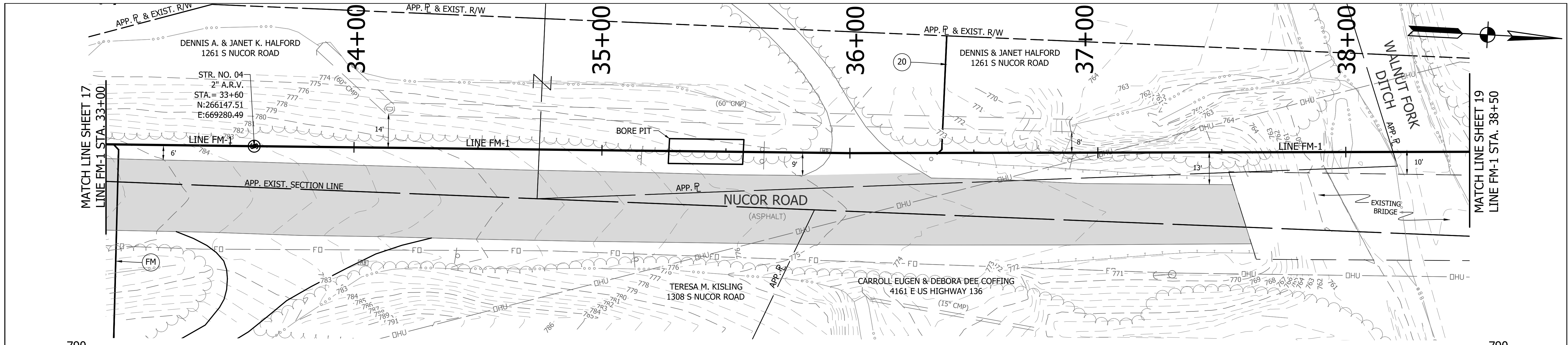


RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED:	KDK	DRAWN:
CHECKED:	SJW	CHECKED:

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
FORCE MAIN - LINE FM-1
 PLAN/PROFILE

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	17 of 126
PROJECT	15-3371

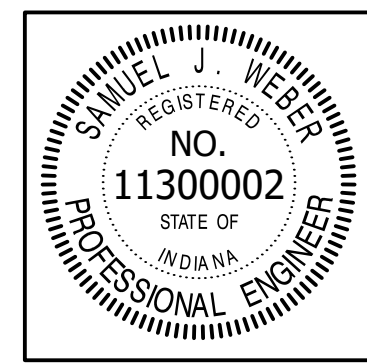
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 FILE: SR32_PP_LINE FM-1-01.dwg
 DIMSCALE: 1/4" = 1' LTSCALE: 20
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:30pm



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REVISIONS			
NO.	DATE	DESCRIPTION	BY



RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
	DESIGN ENGINEER	DATE
DESIGNED: KDK	DRAWN: KDK	
CHECKED: SJW	CHECKED: SJW	

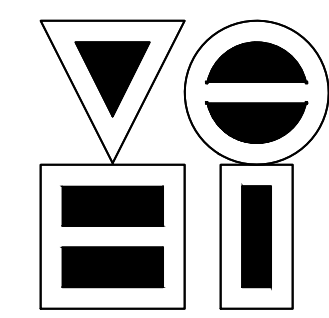
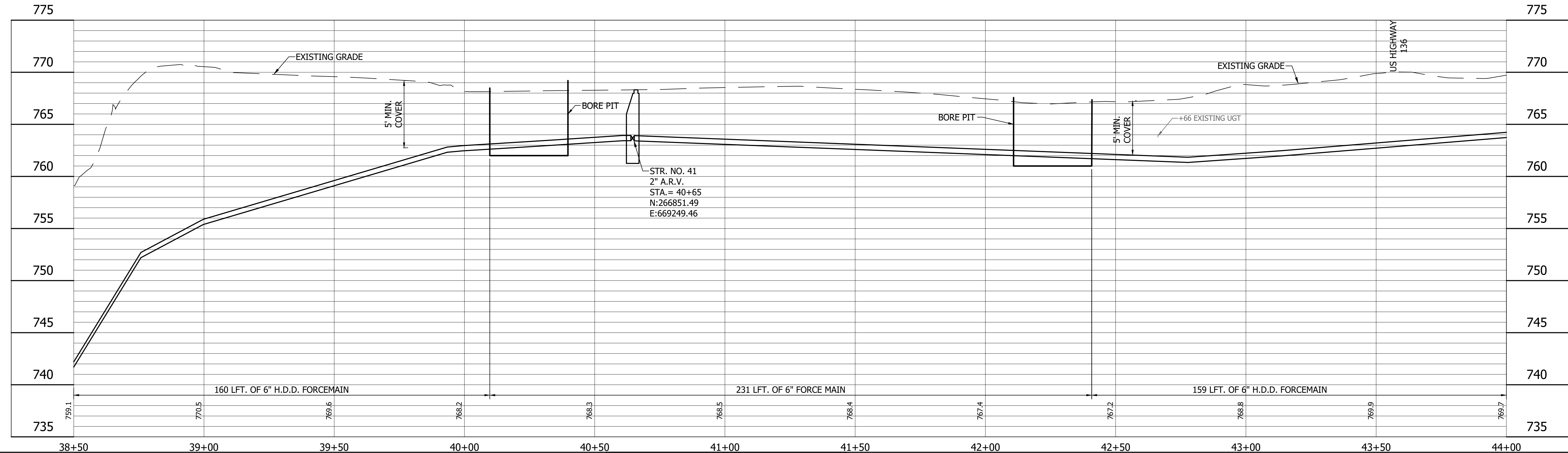
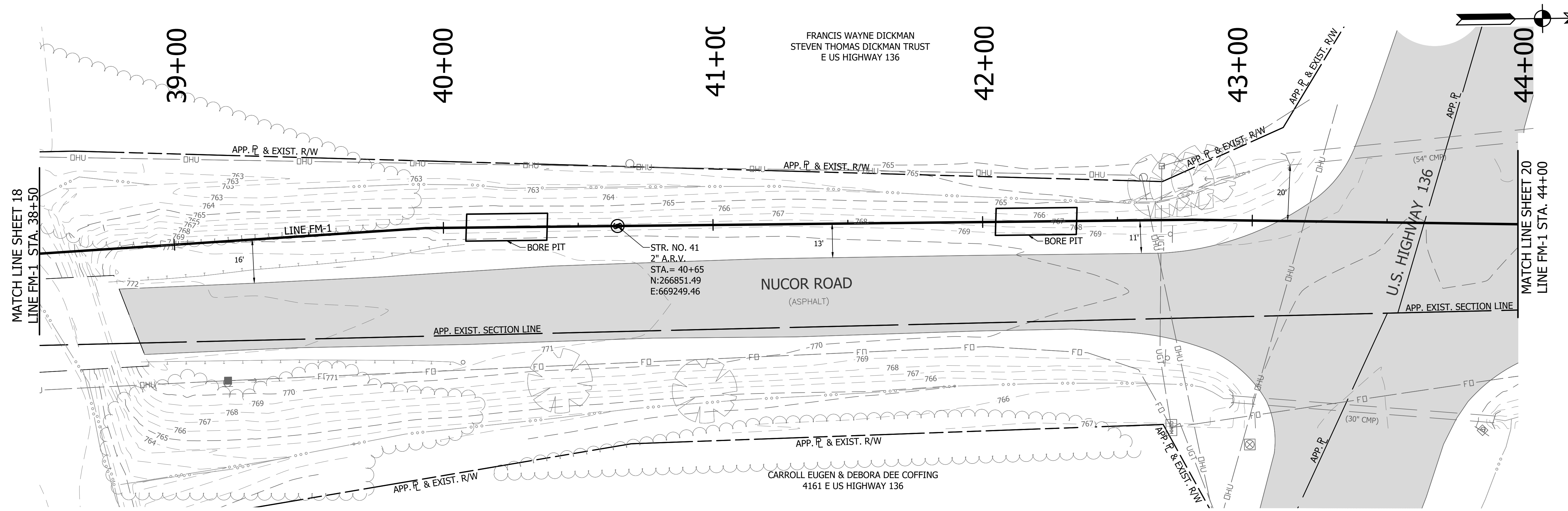
S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

FORCE MAIN - LINE FM-1

PLAN/PROFILE

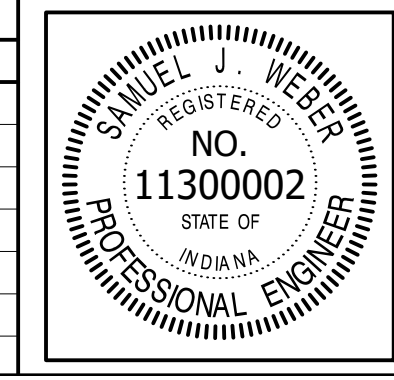
HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	18 of 126
PROJECT	15-3371

DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\Drawings\03-Plan and Profiles
 FILE: PP LINE FM-1-01.dwg
 DIMSCALE: 1/4" = 1' LTSCALE: 20
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:30pm



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REVISIONS			
NO.	DATE	DESCRIPTION	BY

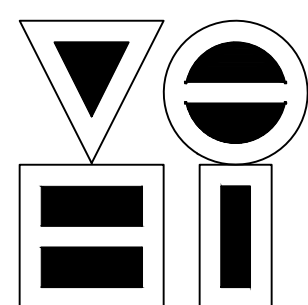
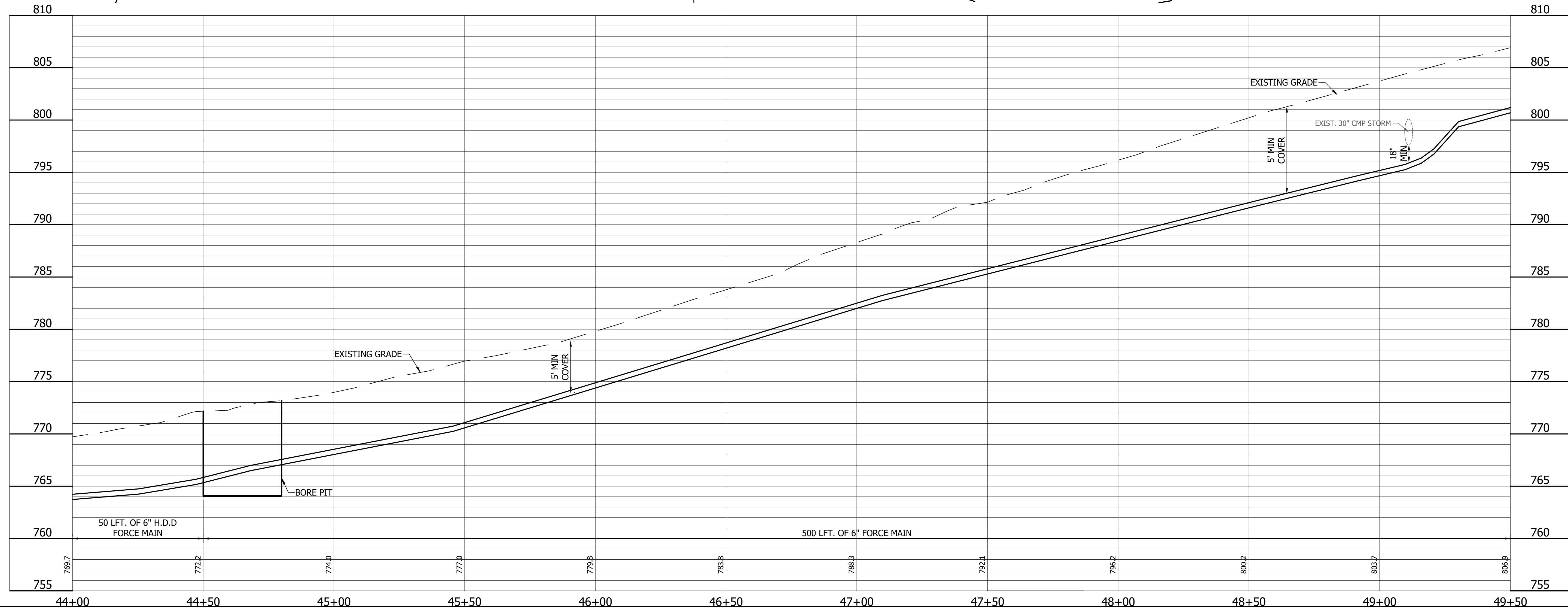
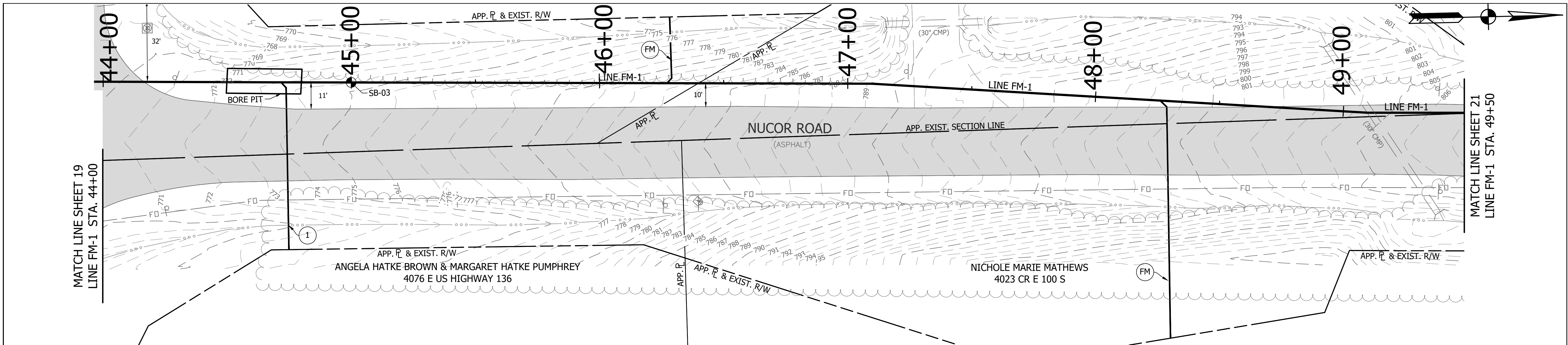


RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED:	KDK	DRAWN:
CHECKED:	SJW	CHECKED:

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
FORCE MAIN - LINE FM-1
 PLAN/PROFILE

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	19 of 126
PROJECT	15-3371

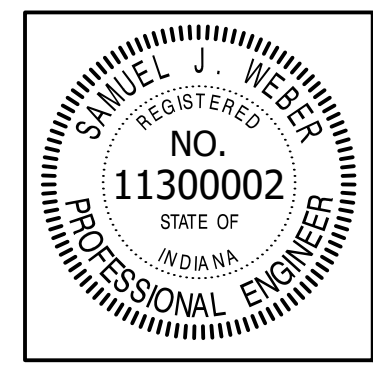
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 FILE:PP LINE FM-1-02.dwg
 DIMSCALE: 1" = 20'
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:31pm



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REVISIONS			
NO.	DATE	DESCRIPTION	BY

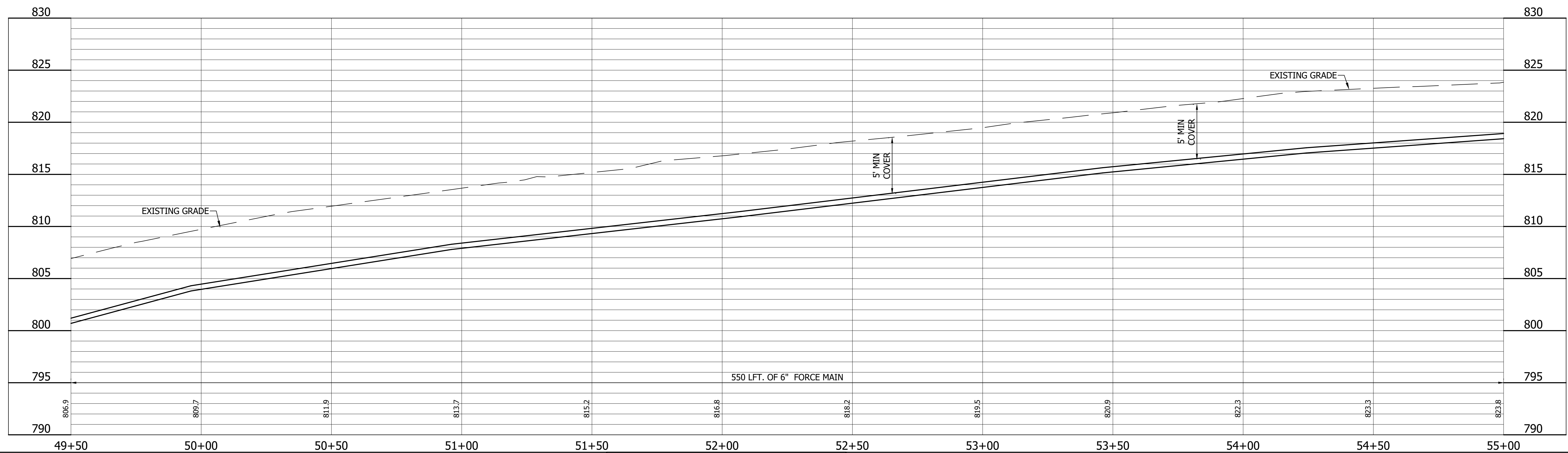
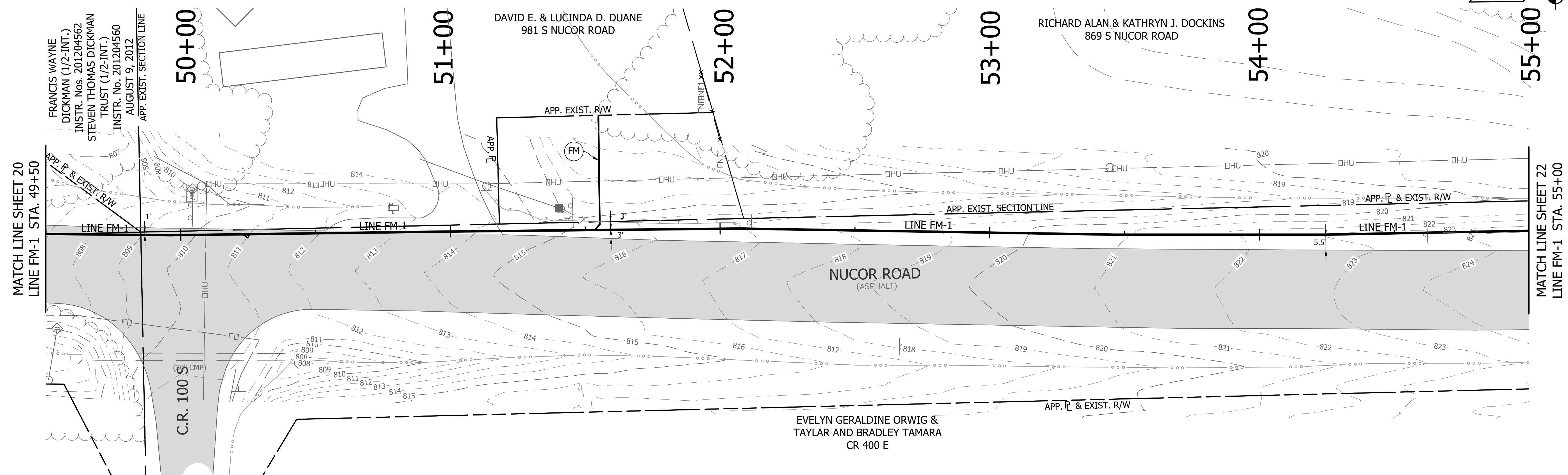
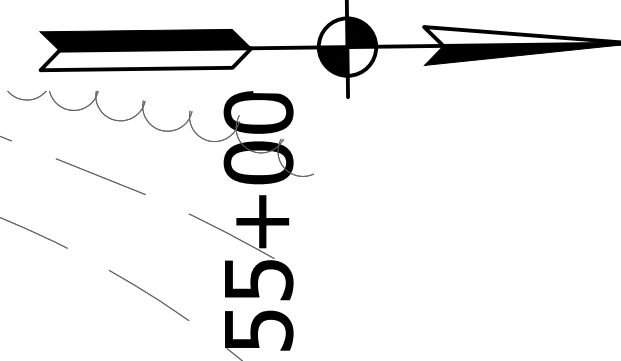


RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED:	KDK	DATE
DRAWN:	KDK	
CHECKED:	SJW	
CHECKED:	SJW	

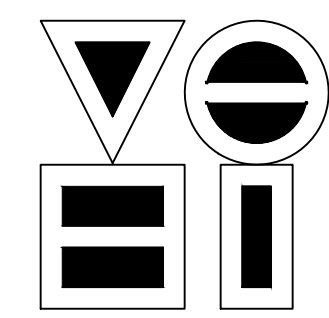
S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

**FORCE MAIN - LINE FM-1
 PLAN/PROFILE**

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	20 of 126
PROJECT	15-3371

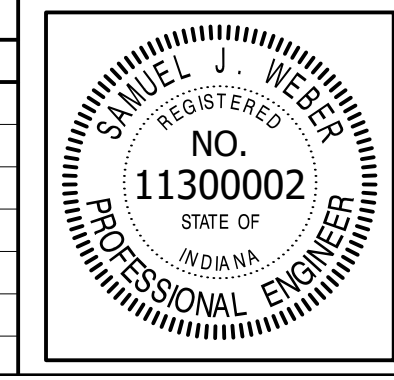


DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\03-Plan and Profiles\
 FILE: PP LINE FM-1-02.dwg
 DIMSCALE: 1/4" = 1' LTSCALE: 20
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:31pm



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 4275 North High School Road Indianapolis, Indiana 46254
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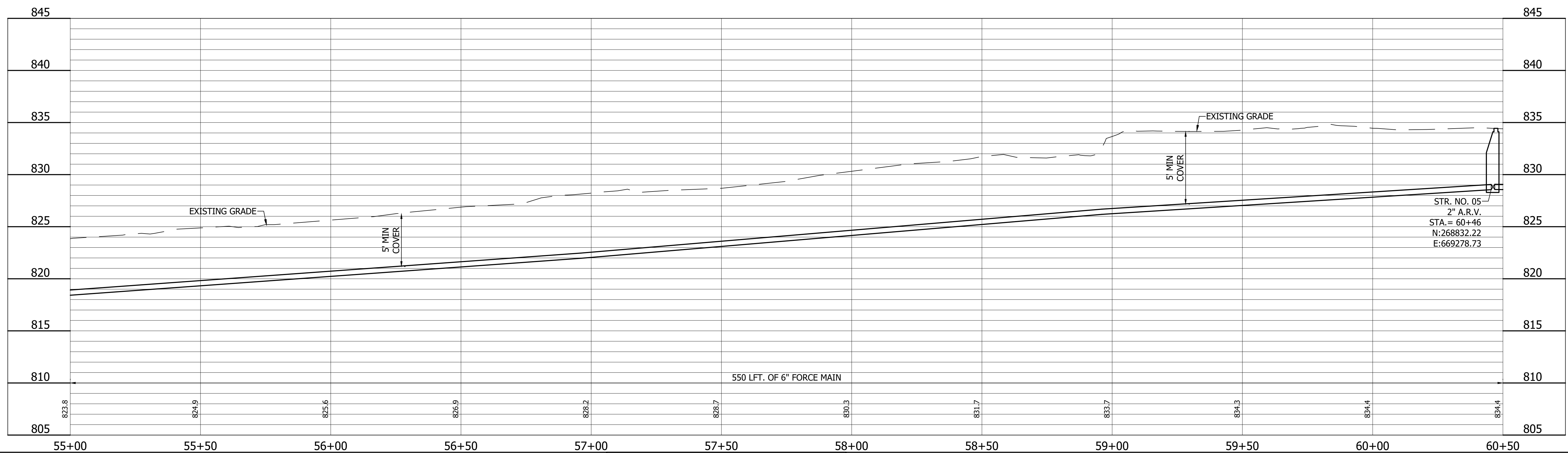
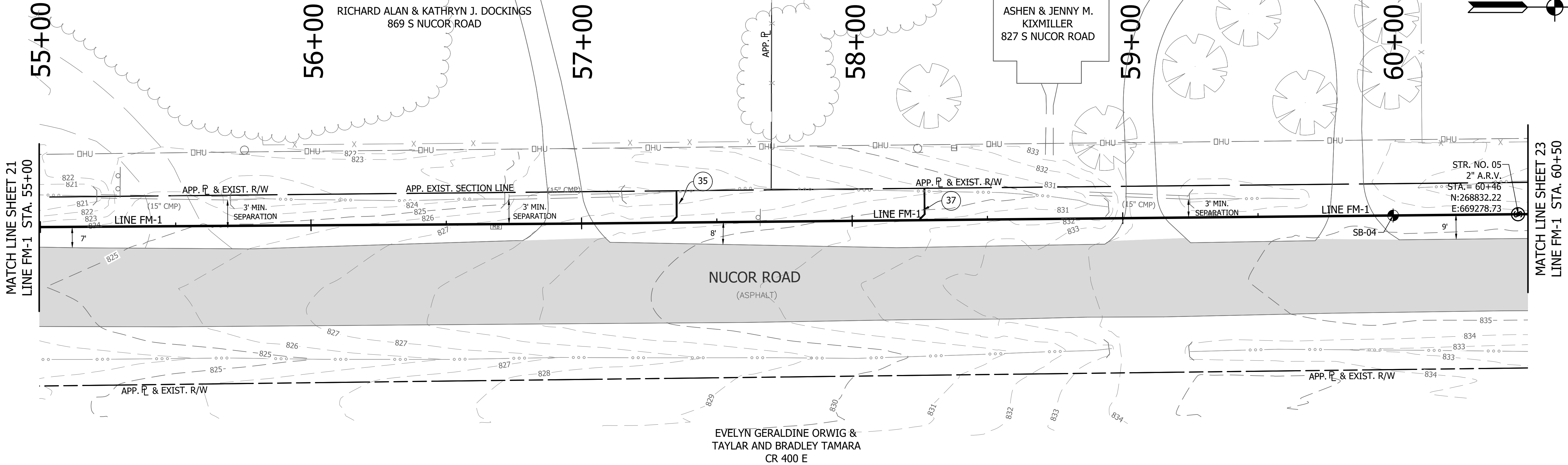
REVISIONS			
NO.	DATE	DESCRIPTION	BY



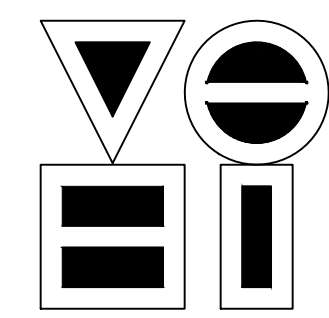
RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED:	KDK	DATE
DRAWN:	KDK	
CHECKED:	SJW	
	CHECKED:	SJW

S.R. 32/NUCOR RD. AREA SANITARY SEWER
 COLLECTION SYSTEM
FORCE MAIN - LINE FM-1
PLAN/PROFILE

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	21 of 126
PROJECT	15-3371

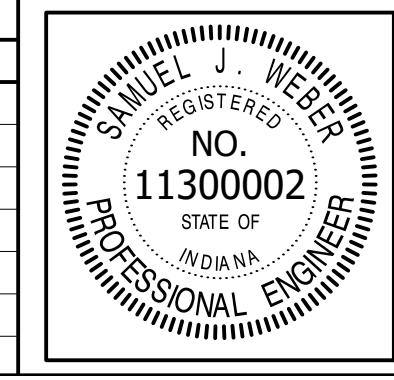


DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\03-Plan and Profiles\
 FILE: 15-3371 SR32 PP LINE FM-1-02.dwg
 DIMSCALE: 1/8" = 1' LTSCALE: 20
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:31pm



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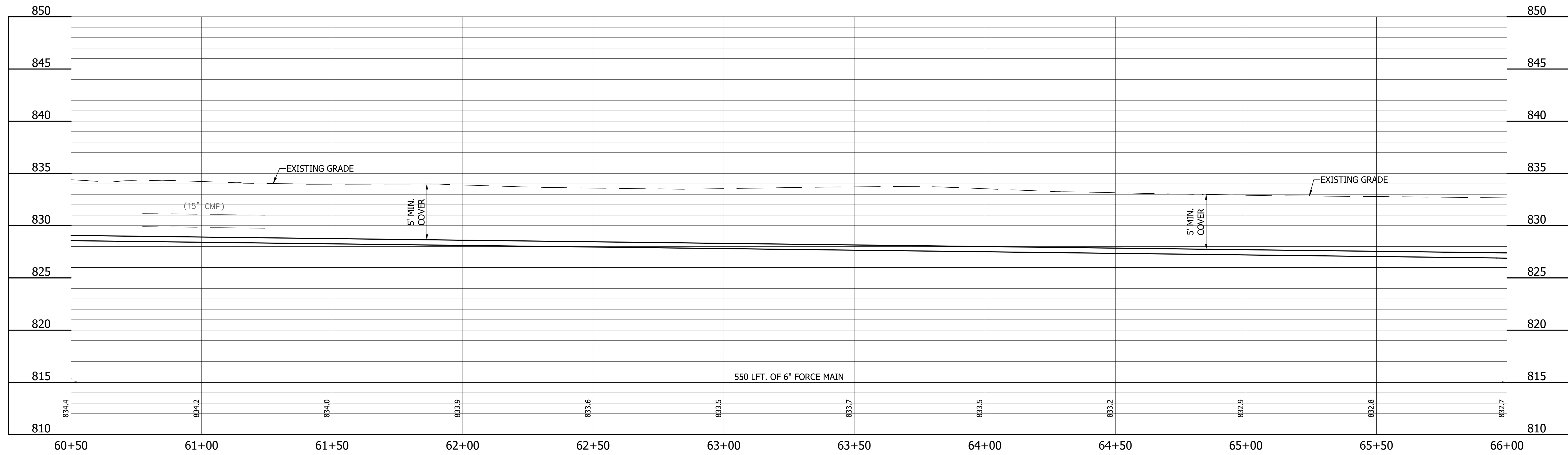
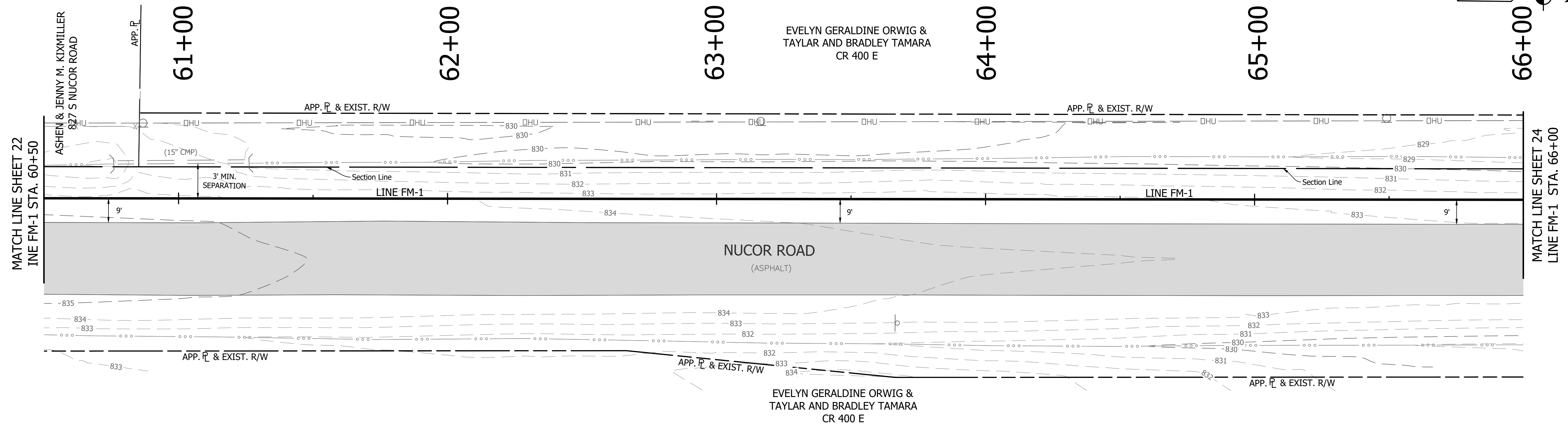
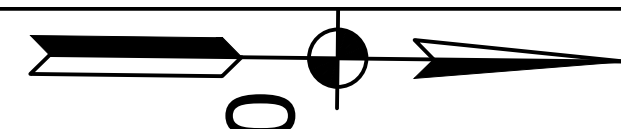
REVISIONS			
NO.	DATE	DESCRIPTION	BY



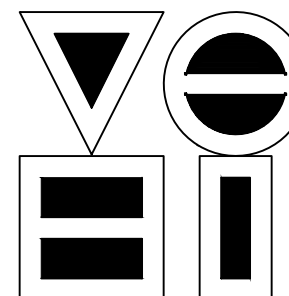
RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED:	KDK	DATE
DRAWN:	KDK	
CHECKED:	SJW	
	CHECKED:	SJW

S.R. 32/NUCOR RD. AREA SANITARY SEWER
 COLLECTION SYSTEM
FORCE MAIN - LINE FM-1
 PLAN/PROFILE

HORIZONTAL SCALE	
1" = 20'	
VERTICAL SCALE	
1" = 5'	
SHEETS	
22	of 126
PROJECT	
15-3371	



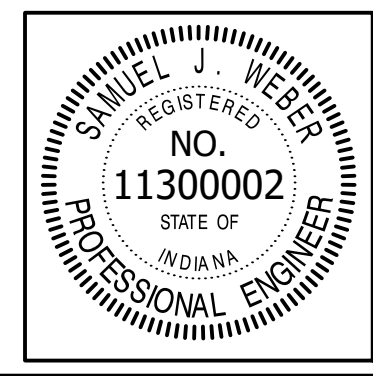
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 FILE: ...PP LINE FM-1-02.dwg
 DIMSCALE: 1" = 20'
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:32pm



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REVISIONS			
NO.	DATE	DESCRIPTION	BY



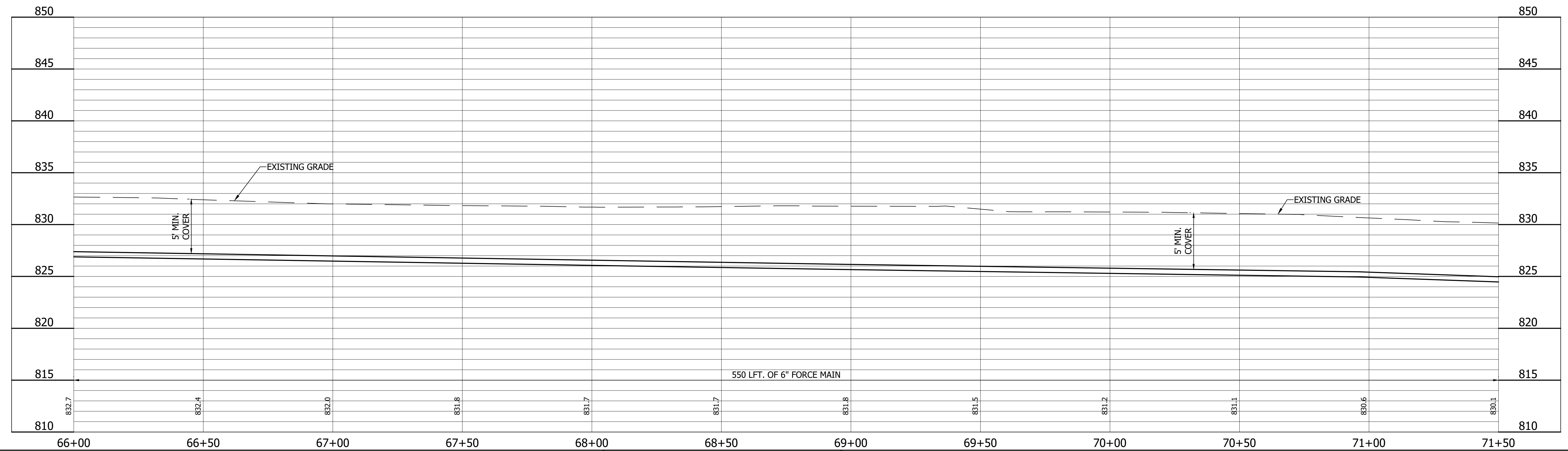
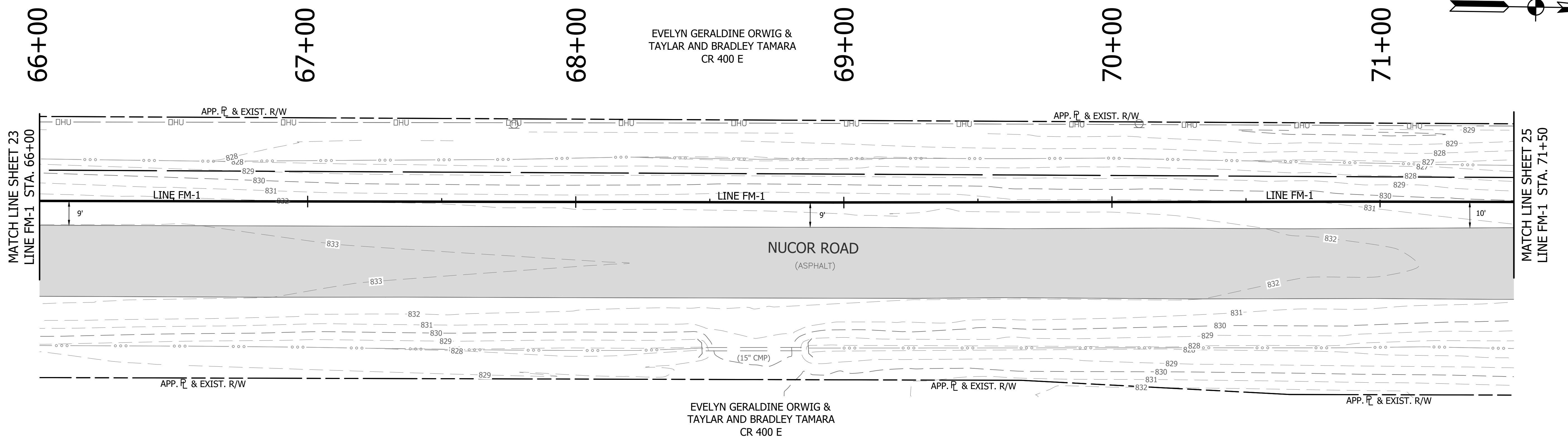
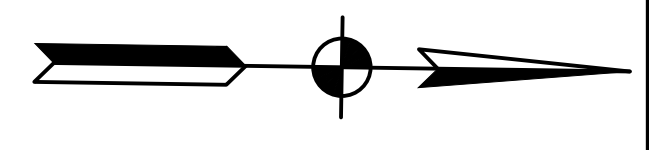
RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED:	KDK	DATE
DRAWN:	KDK	
CHECKED:	SJW	
	CHECKED:	SJW

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

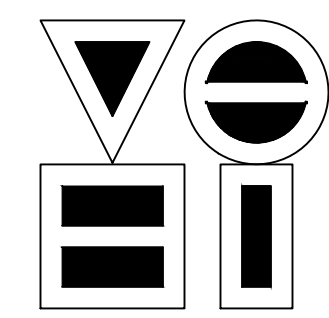
FORCE MAIN - LINE FM-1

PLAN/PROFILE

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	23 of 126
PROJECT	15-3371

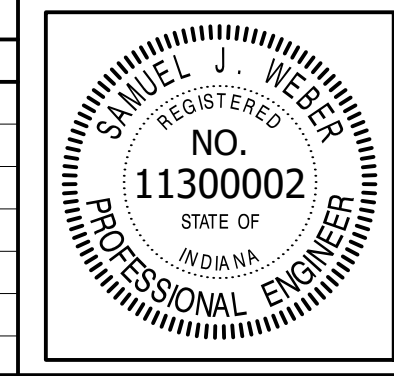


DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\03-Plan and Profiles
 FILE: 15-3371 SR32 PP LINE FM-1-02.dwg
 DIMSCALE: 1/8" = 1' LTSCALE: 20
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:32pm



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 Phone: (317) 293-3542 Fax: (317) 293-4737

REVISIONS			
NO.	DATE	DESCRIPTION	BY

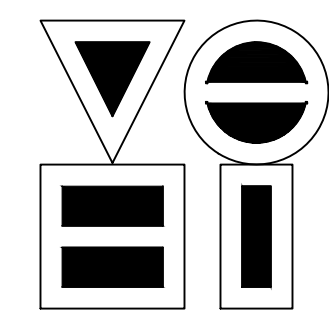
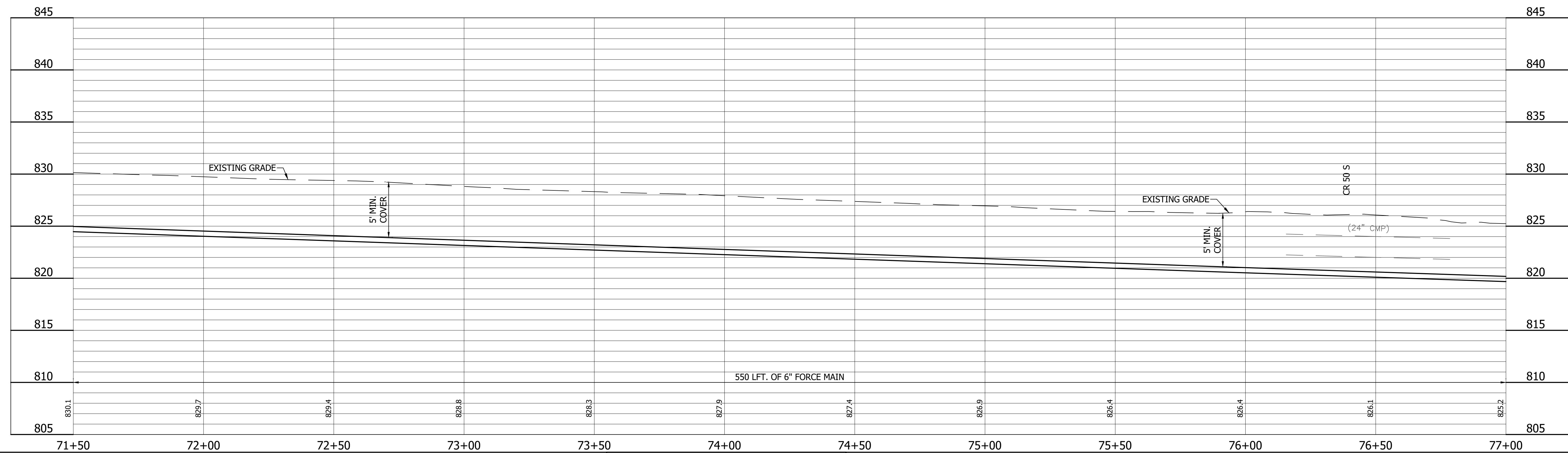
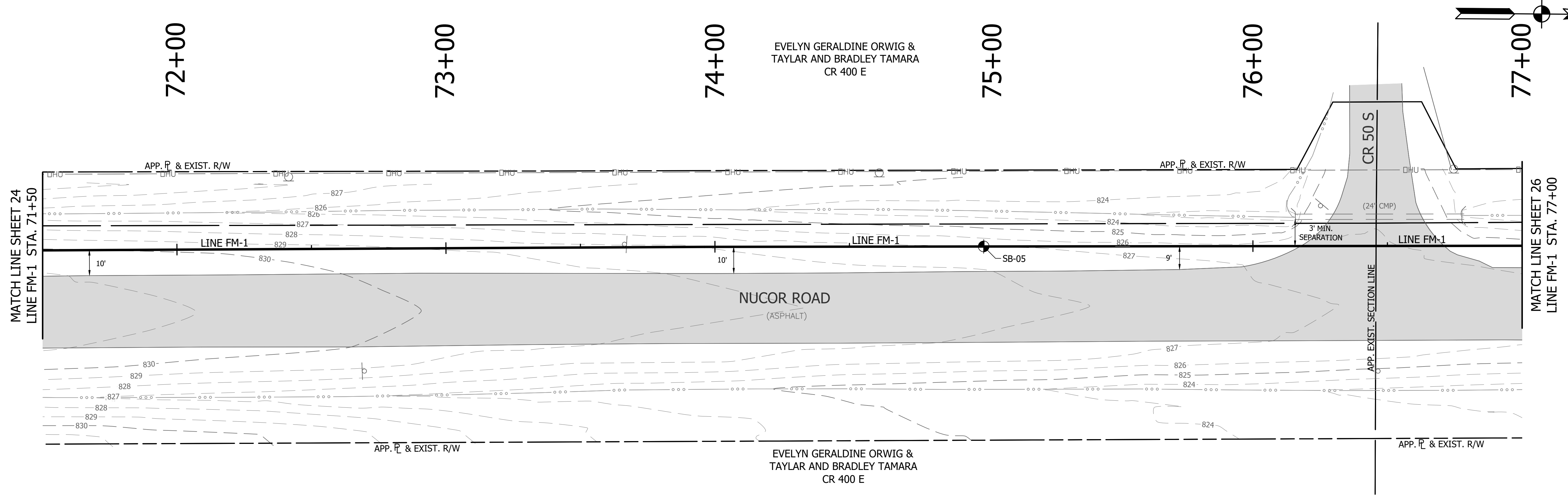


RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED:	KDK	DATE
DRAWN:	KDK	
CHECKED:	SJW	
CHECKED:	SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
FORCE MAIN - LINE FM-1
PLAN/PROFILE

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	24 of 126
PROJECT	15-3371

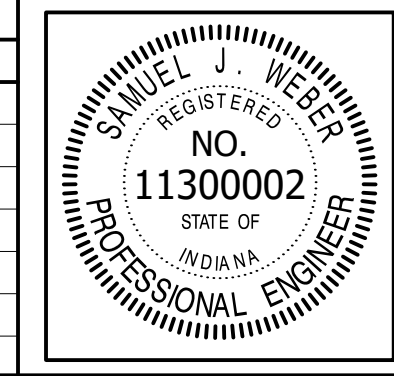
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 DIMSCALE: 1" = 20'
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:32pm



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REVISIONS			
NO.	DATE	DESCRIPTION	BY



RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED:	KDK	DATE
DRAWN:	KDK	
CHECKED:	SJW	
	CHECKED:	SJW

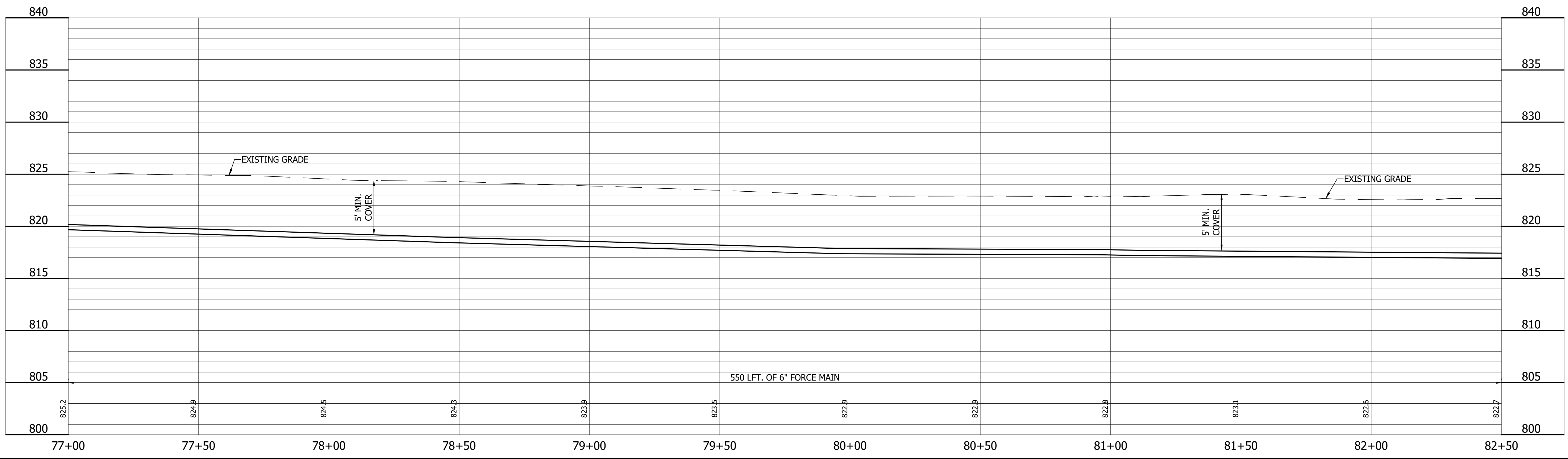
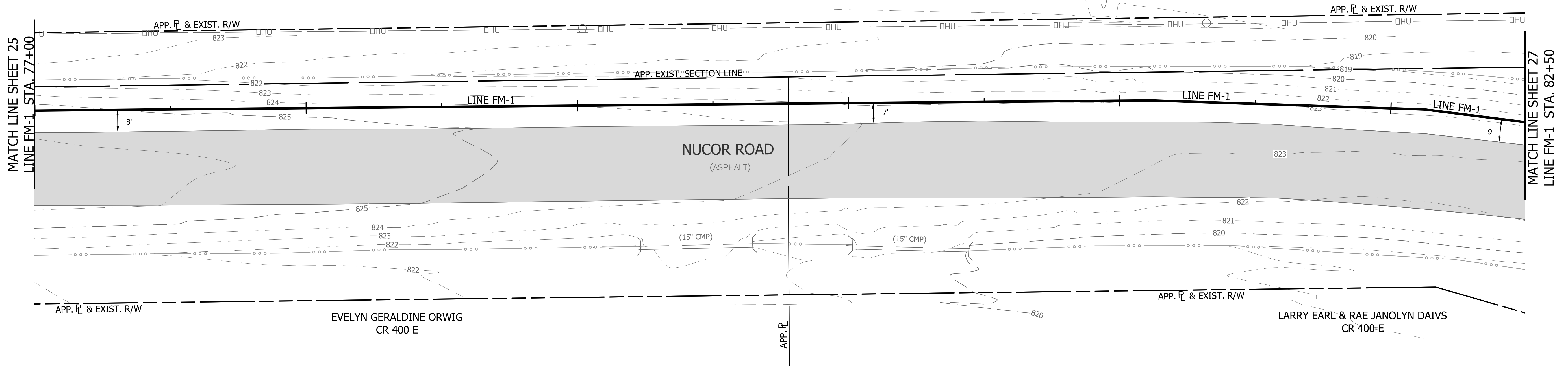
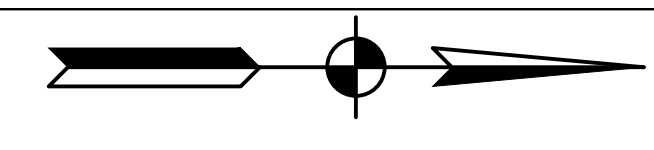
S.R. 32/NUCOR RD. AREA SANITARY SEWER
 COLLECTION SYSTEM

**FORCE MAIN - LINE FM-1
 PLAN/PROFILE**

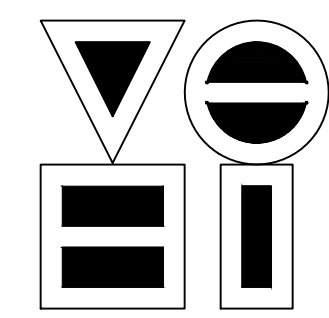
HORIZONTAL SCALE	
1" = 20'	
VERTICAL SCALE	
1" = 5'	
SHEETS	
25	of 126
PROJECT	
15-3371	

77+00 78+00 79+00 80+00 81+00 82+00

LARRY EARL & RAE JANOLYN DAIVS
TRACTION ROAD

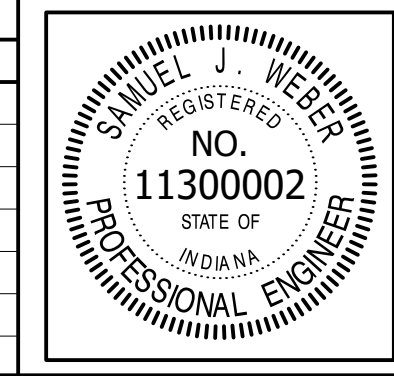


DIRECTORY: F:\2015\15-3371_SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\03-Plan and Profiles\
 FILE: PP LINE FM-1-02.dwg
 DIMSCALE: 1/4" = 1' LTSCALE: 20
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:32pm



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REVISIONS			
NO.	DATE	DESCRIPTION	BY



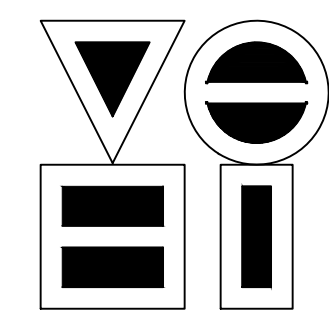
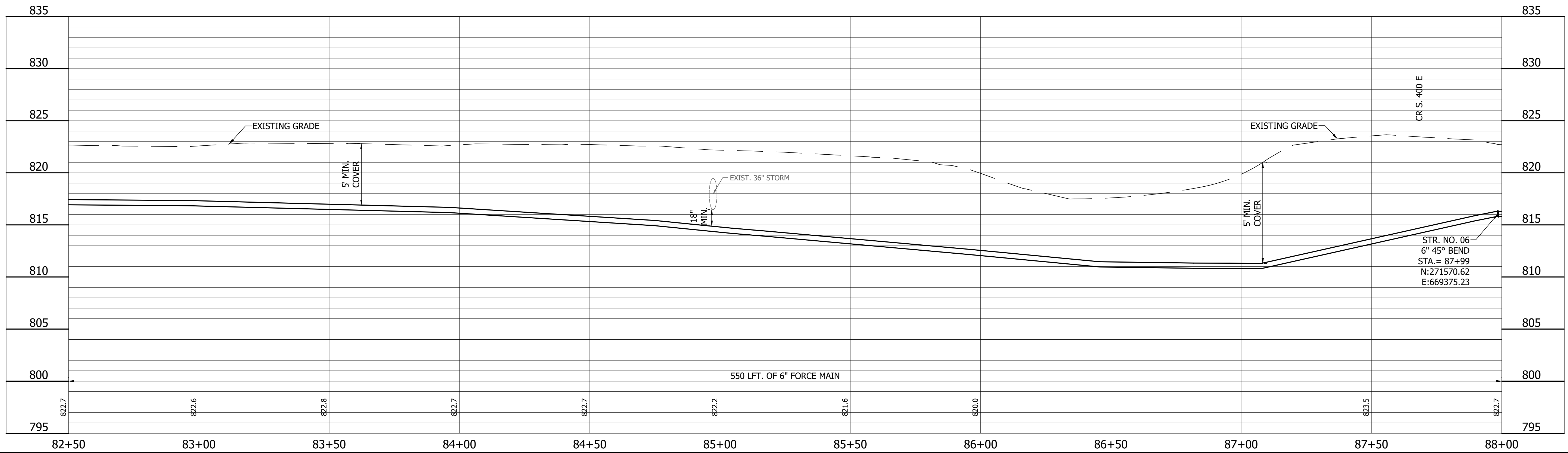
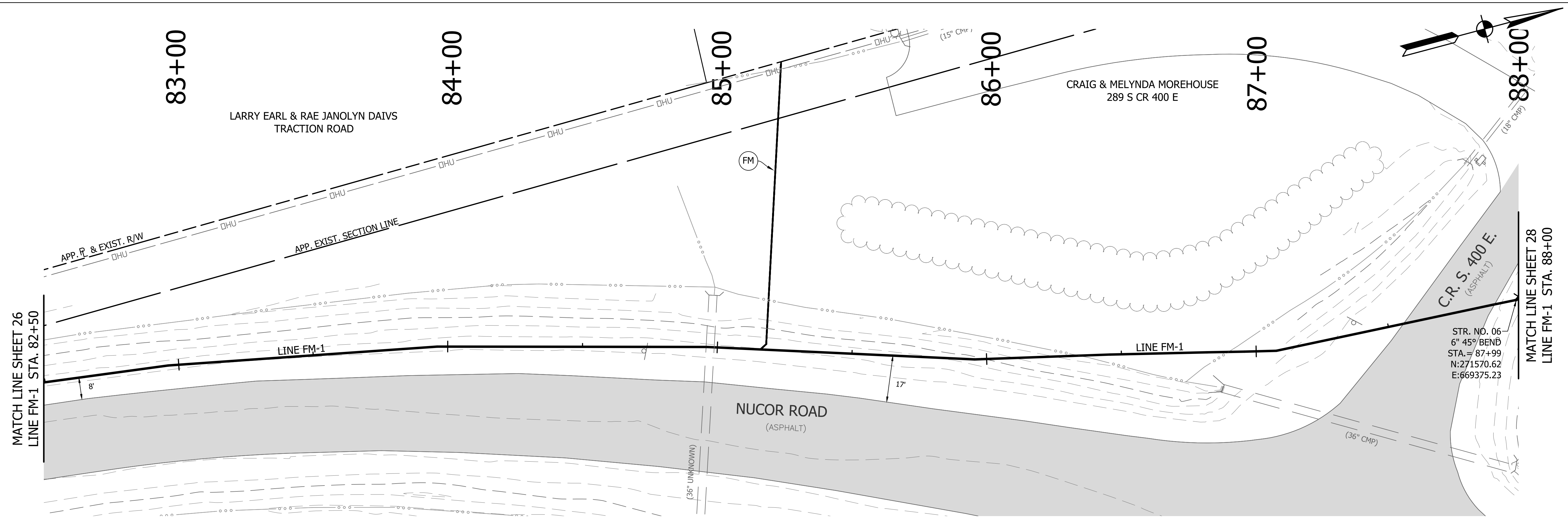
RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED:	KDK	DATE
DRAWN:	KDK	
CHECKED:	SJW	
	CHECKED:	SJW

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

FORCE MAIN - LINE FM-1
PLAN/PROFILE

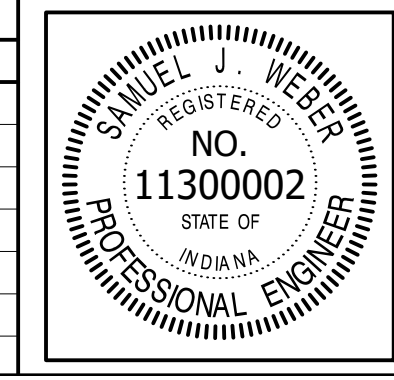
HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	26 of 126
PROJECT	15-3371

DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\03-Plan and Profiles\
 FILE: PP LINE FM-1-02.dwg
 DIMSCALE: 1/4" = 1' LTSCALE: 20
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:33pm



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 4275 North High School Road Indianapolis, Indiana 46254
 vse@vsengineering.com www.vsengineering.com
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REVISIONS			
NO.	DATE	DESCRIPTION	BY

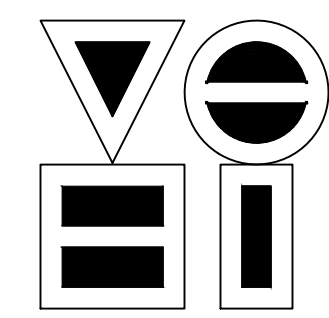
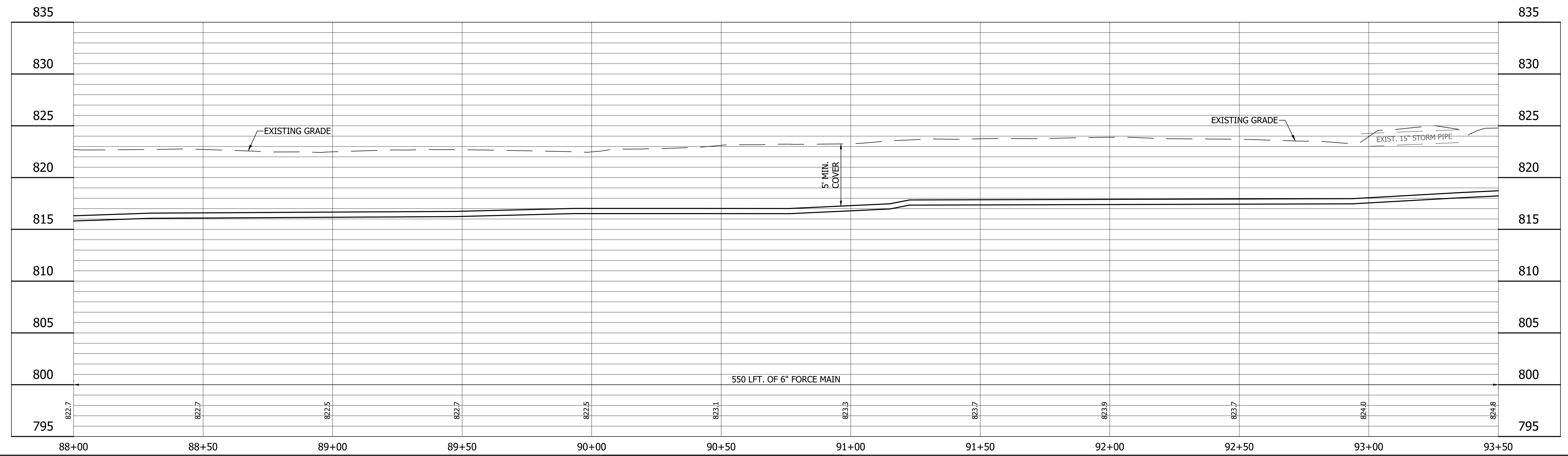
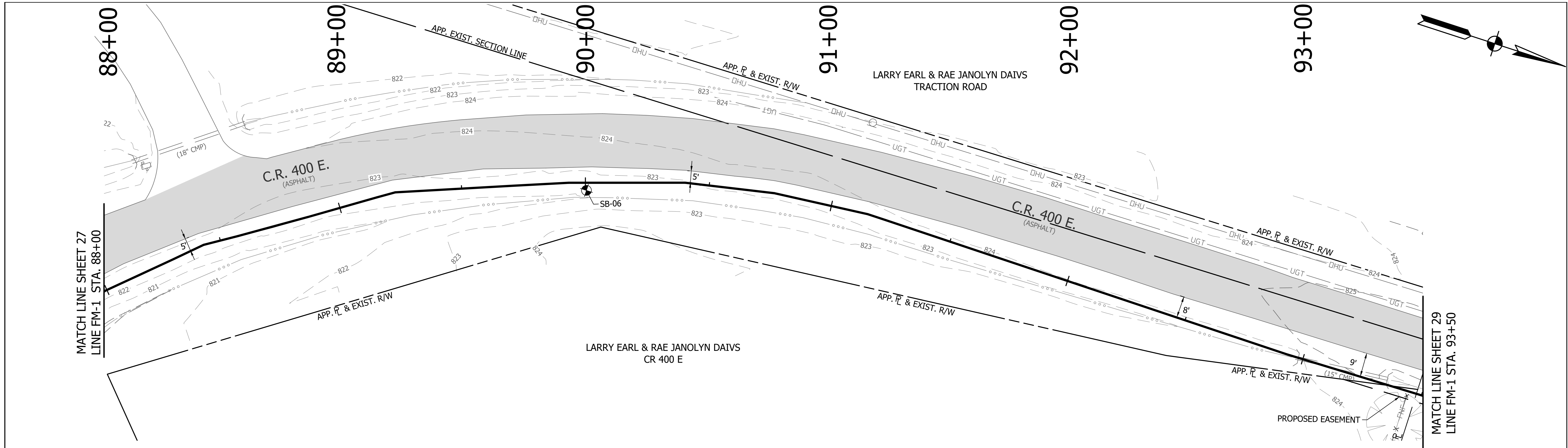


RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED:	KDK	DRAWN:
CHECKED:	SJW	CHECKED:

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
FORCE MAIN - LINE FM-1
 PLAN/PROFILE

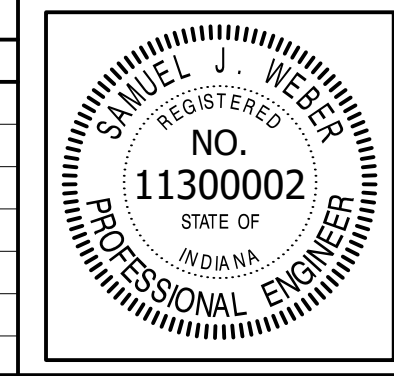
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VERTICAL SCALE	1" = 5'
SHEETS	27 of 126
PROJECT	15-3371

DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\03-Plan and Profiles
 FILE: ...PP LINE FM-1-03.dwg
 DIMSCALE: 1" = 20'
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:34pm



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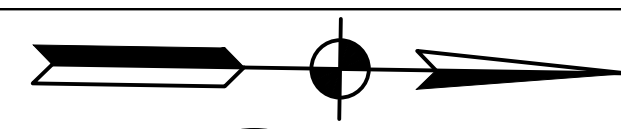
REVISIONS			
NO.	DATE	DESCRIPTION	BY



RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED:	KDK	DRAWN:
CHECKED:	SJW	CHECKED:

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
FORCE MAIN - LINE FM-1
PLAN/PROFILE

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	28 of 126
PROJECT	15-3371



94+00

95+00

96+00

97+00

98+00

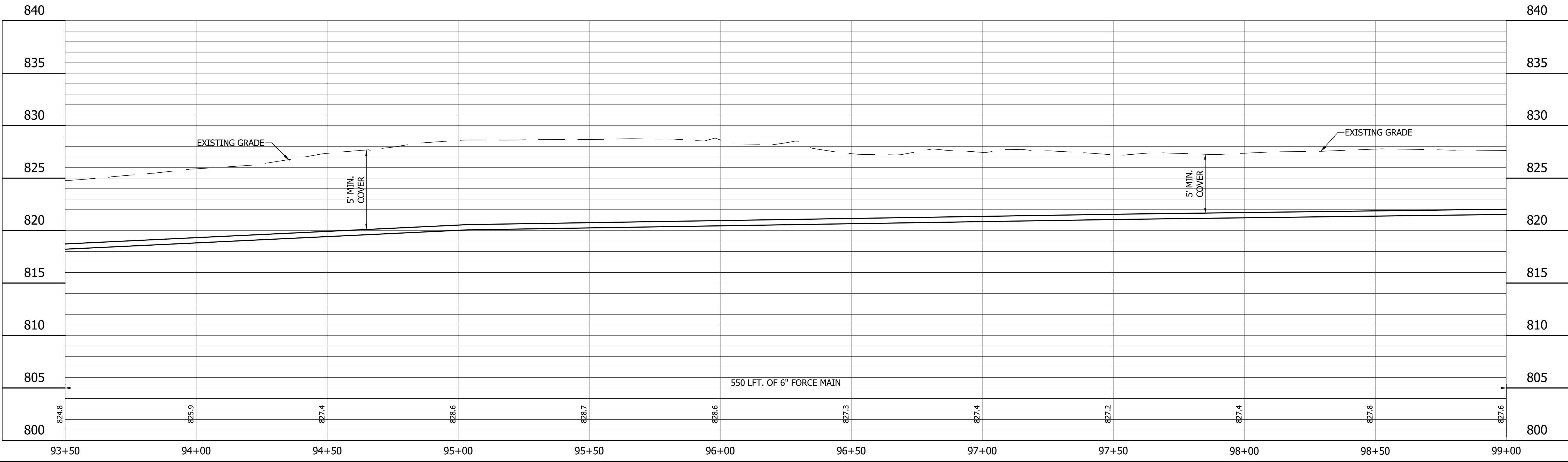
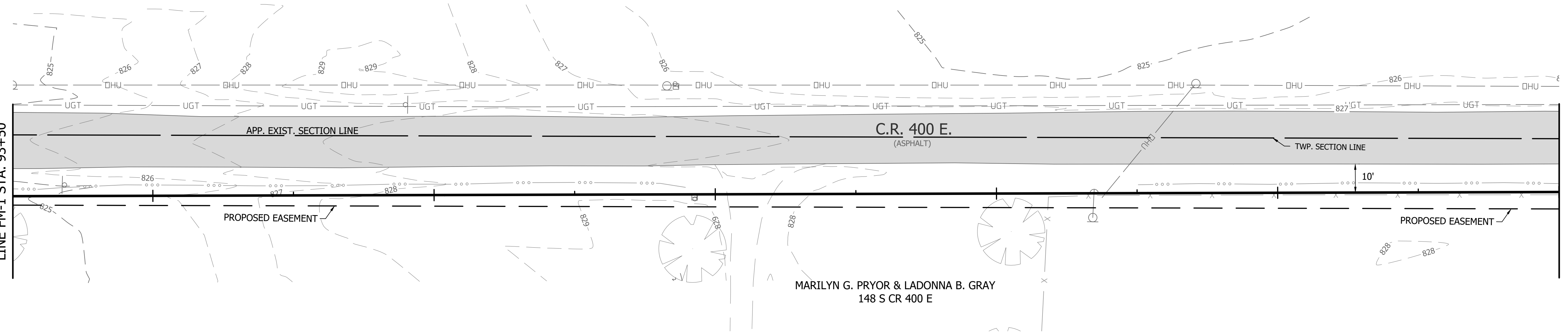
99+00

LARRY EARL & RAE JANOLYN DAVIS
TRACTION ROAD

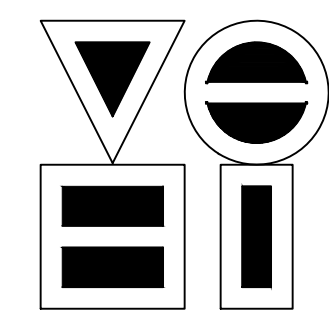
MARILYN G. PRYOR & LADONNA B. GRAY
148 S CR 400 E

MATCH LINE SHEET 28
LINE FM-1 STA. 93+50

MATCH LINE SHEET 30
LINE FM-1 STA. 99+00

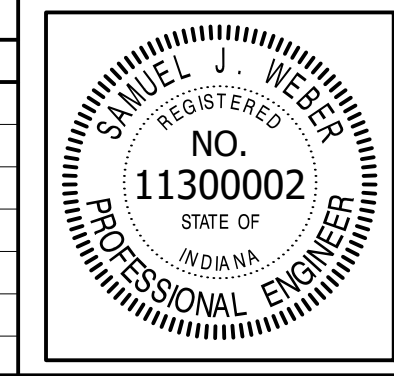


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 FILE:PP LINE FM-1-03.dwg
 DIMSCALE: 1" = 20'
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:34pm



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REVISIONS			
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DESIGNED:	KDK	DATE
DRAWN:	KDK	
CHECKED:	SJW	
CHECKED:	SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER
COLLECTION SYSTEM

**FORCE MAIN - LINE FM-1
PLAN/PROFILE**

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	29 of 126
PROJECT	15-3371

99+00

100+00

101+00

102+00

103+00

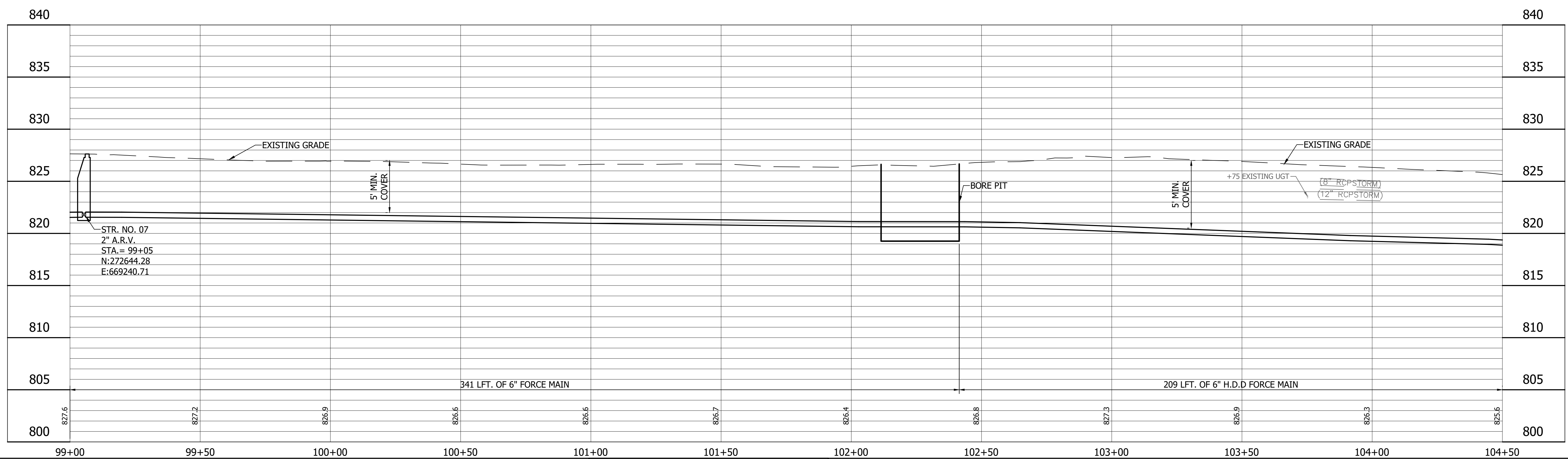
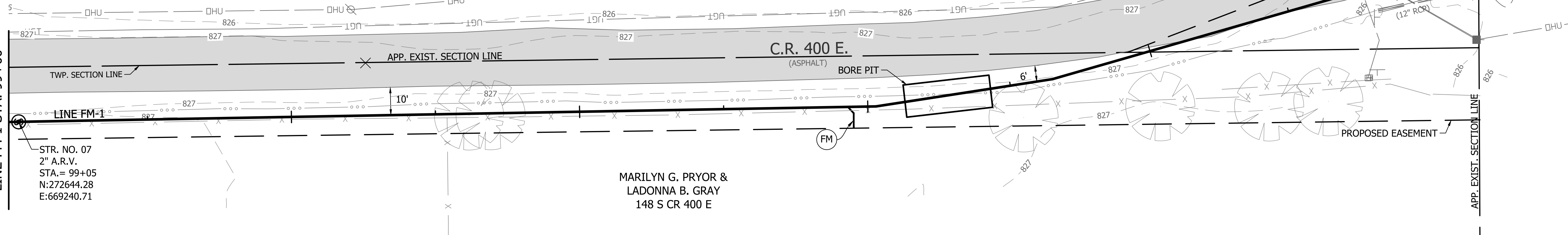
104+00

LARRY EARL & RAE JANOLYN DAVIS
TRACTION ROAD

MARILYN G. PRYOR &
LADONNA B. GRAY
148 S CR 400 E

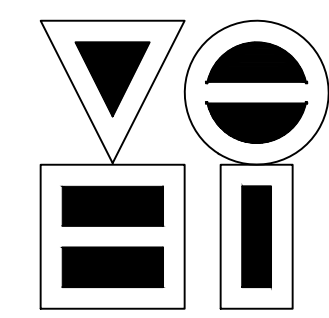
MATCH LINE SHEET 29
LINE FM-1 STA. 99+00

MATCH LINE SHEET 31
LINE FM-1 STA. 104+50



STR. NO. 07
2" A.R.V.
STA. = 99+05
N:272644.28
E:669240.71

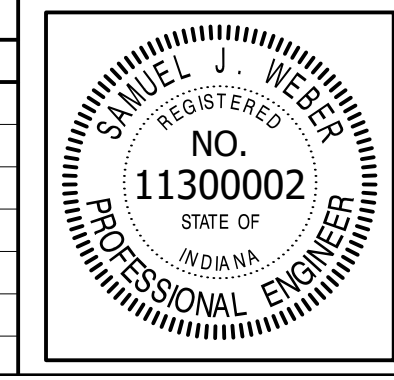
STR. NO. 07
2" A.R.V.
STA. = 99+05
N:272644.28
E:669240.71



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CHECKED:	SJW	
DRAWN:	KDK	
CHECKED:	SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

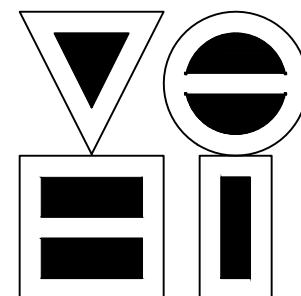
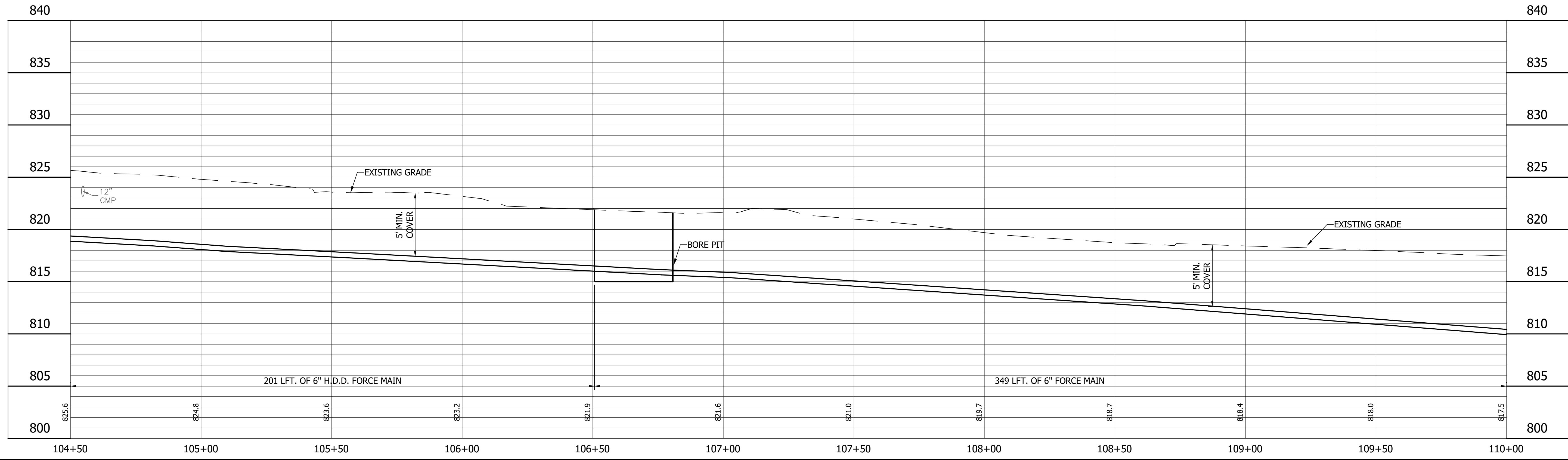
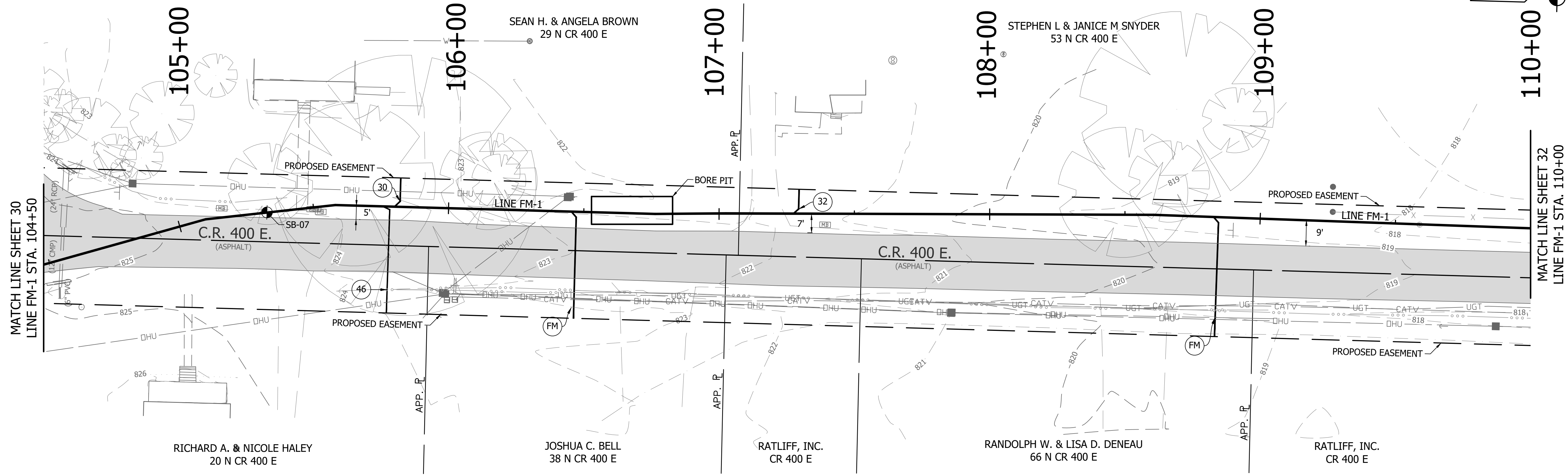
**FORCE MAIN - LINE FM-1
PLAN/PROFILE**

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	30 of 126
PROJECT	15-3371

DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\03-Plan and Profiles\
 FILE: 15-3371_PP_LINE FM-1-03.dwg
 DIMSCALE: 1/4" = 1' LTSCALE: 20
 PLOTTED BY: JMowery
 DATE: 06/06/2018 6:34pm



DIRECTORY: F:\2015\15-3371_SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\03-Plan and Profiles
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 DATE: Jun 06, 2018 - 6:35pm

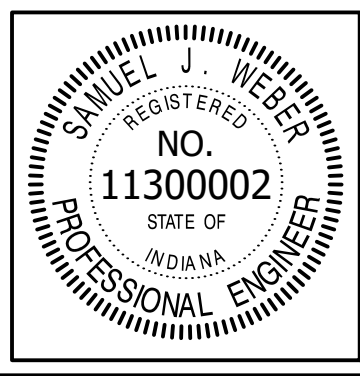


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NO.	DATE	DESCRIPTION	BY



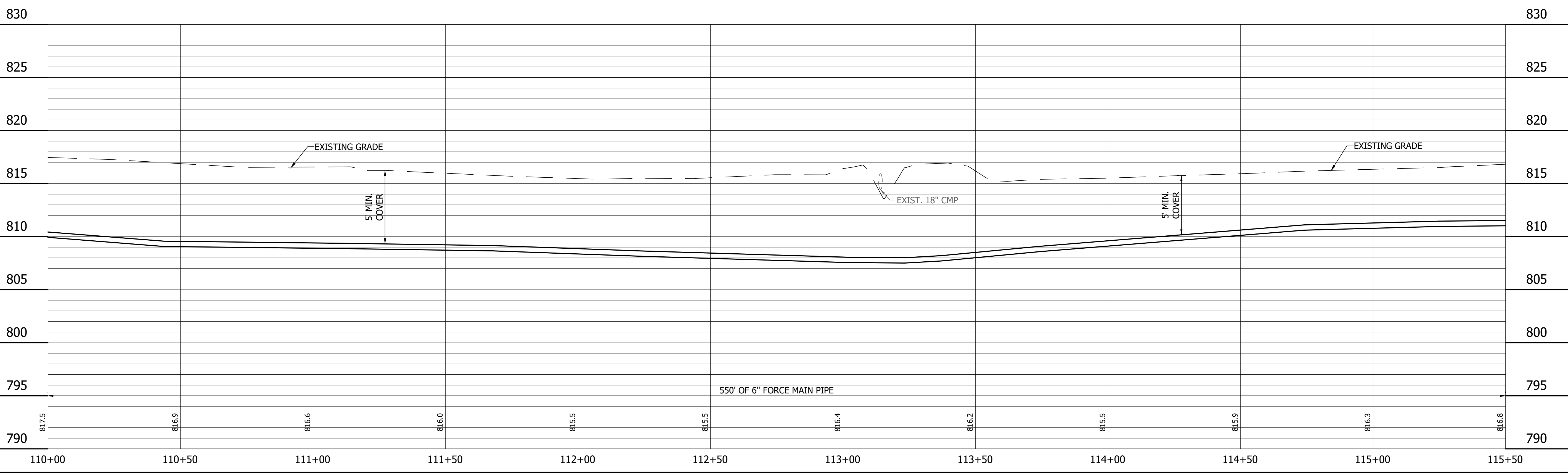
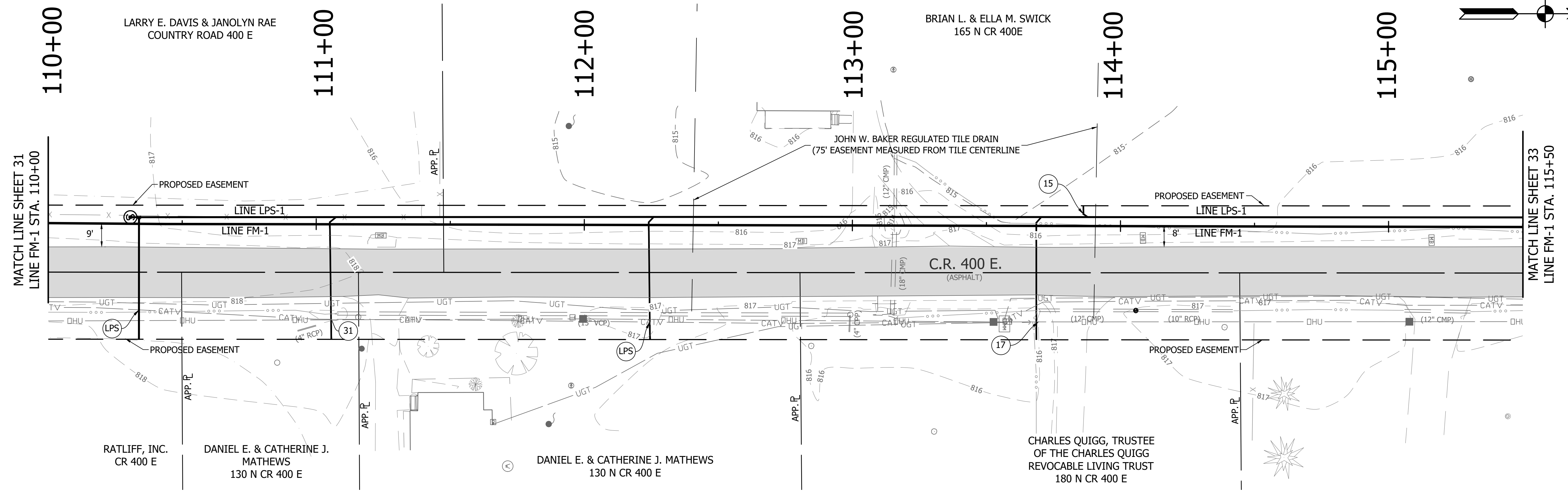
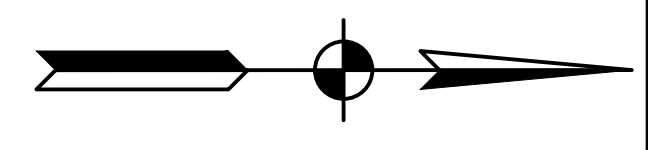
RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED:	KDK	DRAWN:
CHECKED:	SJW	CHECKED:

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

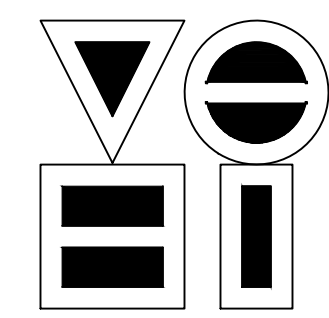
FORCE MAIN - LINE FM-1

PLAN/PROFILE

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	31 of 126
PROJECT	15-3371

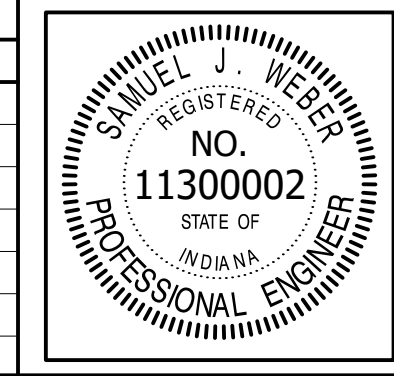


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 DIMSCALE: 1/8" = 1' LTSCALE: 20
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:35pm



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REVISIONS			
NO.	DATE	DESCRIPTION	BY



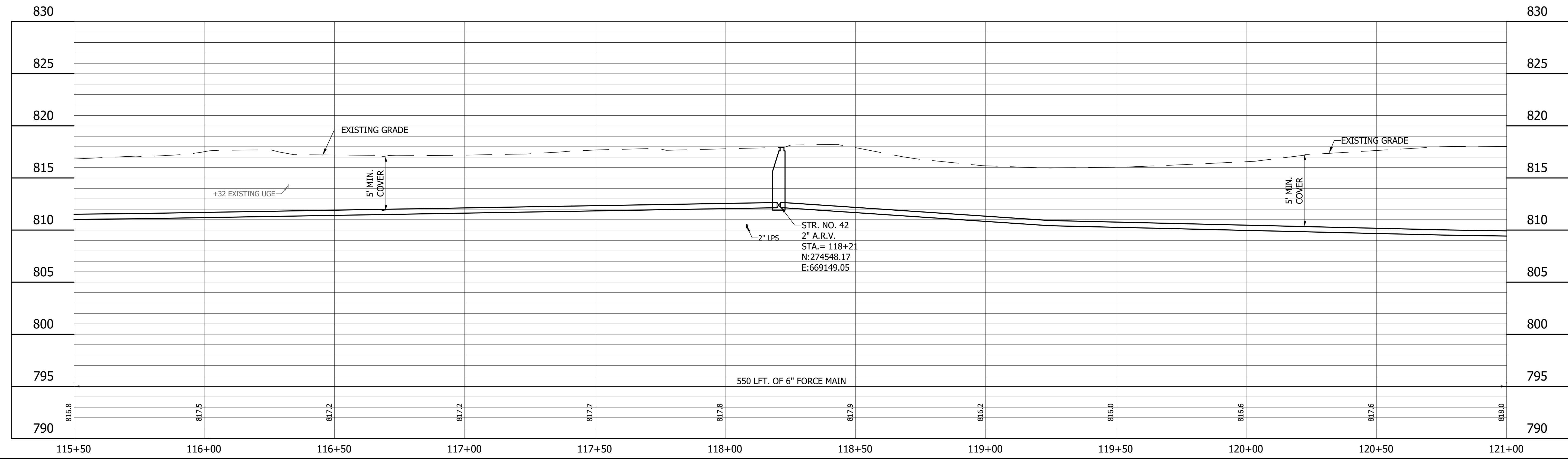
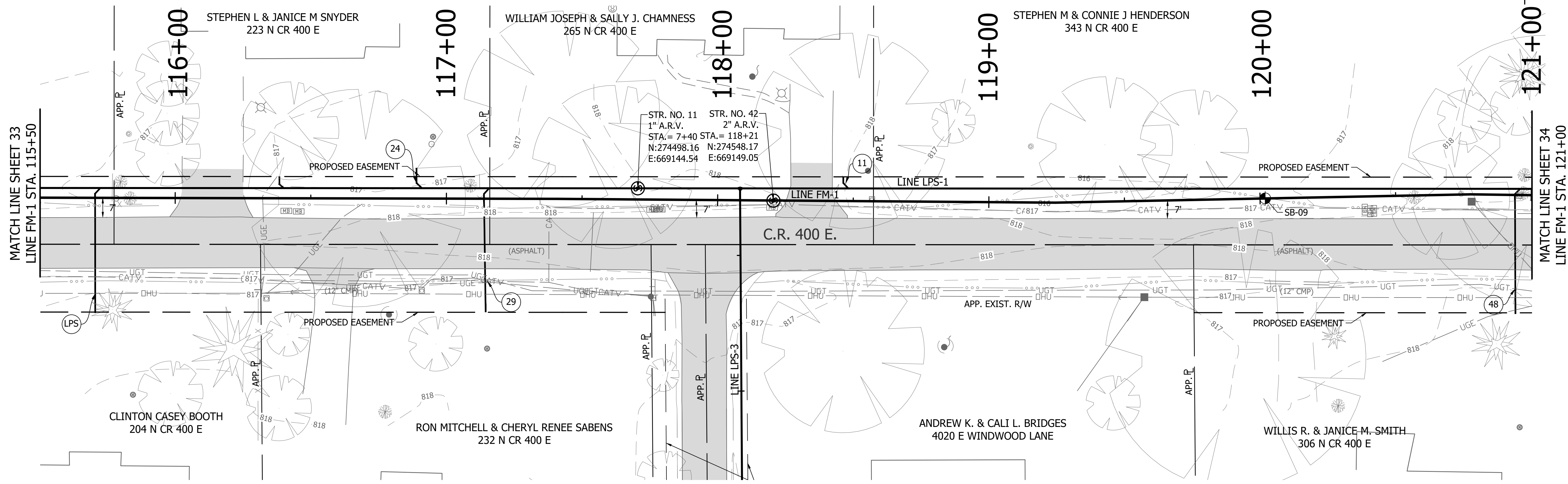
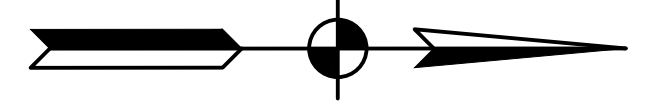
RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED:	KDK	DATE
DRAWN:	KDK	
CHECKED:	SJW	
	CHECKED:	SJW

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

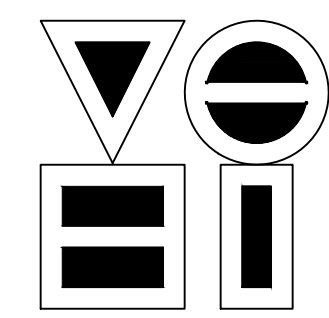
FORCE MAIN - LINE FM-1

PLAN/PROFILE

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	32 of 126
PROJECT	15-3371

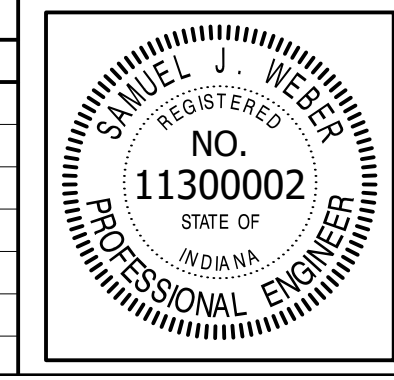


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 FILE: PP LINE FM-1-03.dwg
 DIMSCALE: 1"=20'
 PLOTTED BY: J.Mowery
 DATE: Jun 06, 2018 - 6:35pm



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REVISIONS			
NO.	DATE	DESCRIPTION	BY

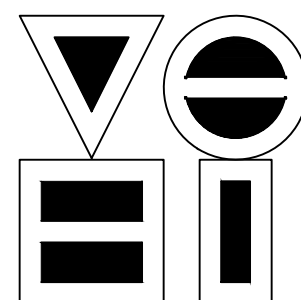
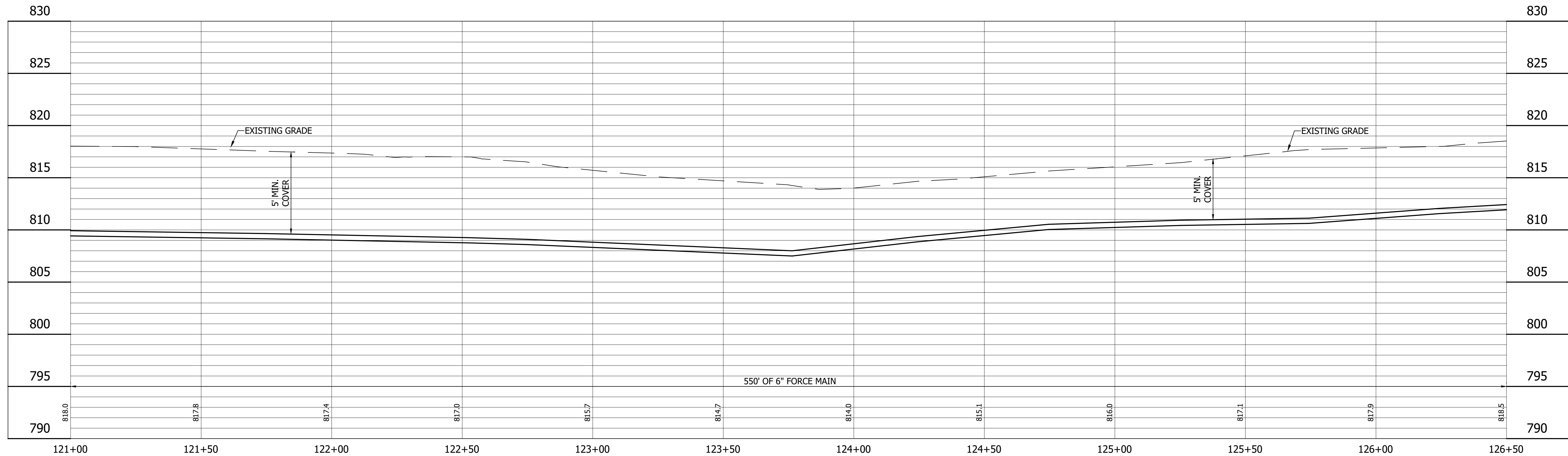
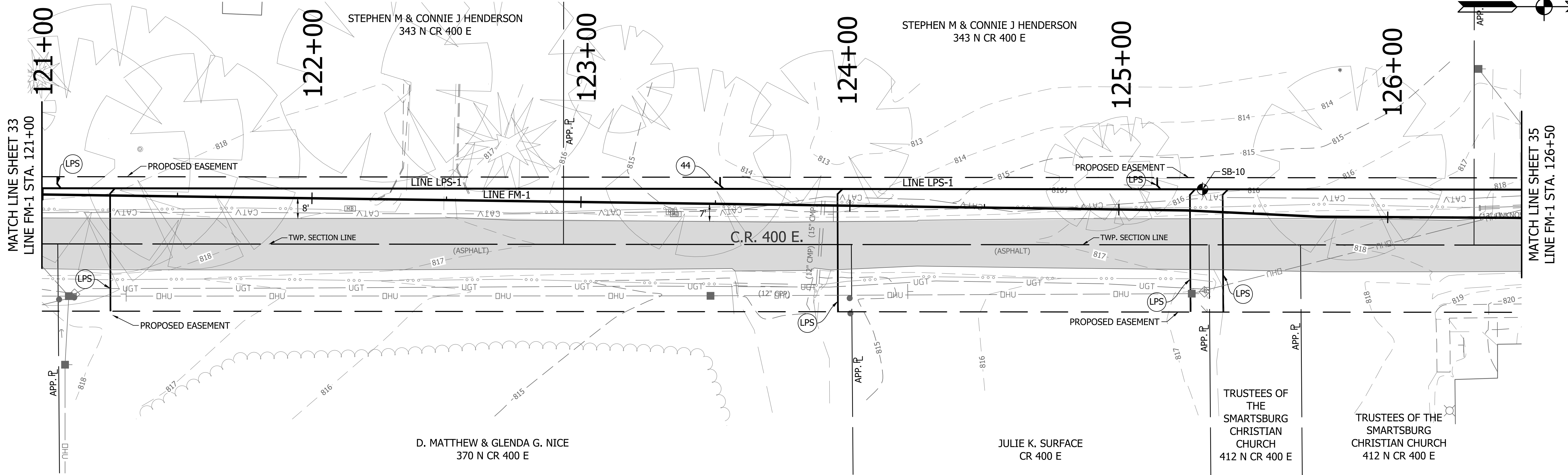


RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED: KDK	DRAWN: KDK	DATE
CHECKED: SJW	CHECKED: SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
FORCE MAIN - LINE FM-1
 PLAN/PROFILE

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	33 of 126
PROJECT	15-3371

DIRECTORY: F:\2015\15-3371_SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\03-Plan and Profiles
 FILE:PP LINE FM-1-03.dwg
 DIMSCALE: 1" = 5'
 PLOTTED BY: J.Mowery
 DATE: Jun 06, 2018 - 6:36pm

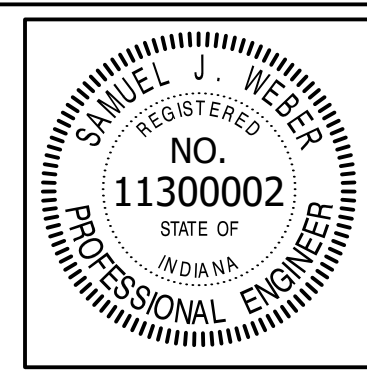


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NO.	DATE	DESCRIPTION	BY



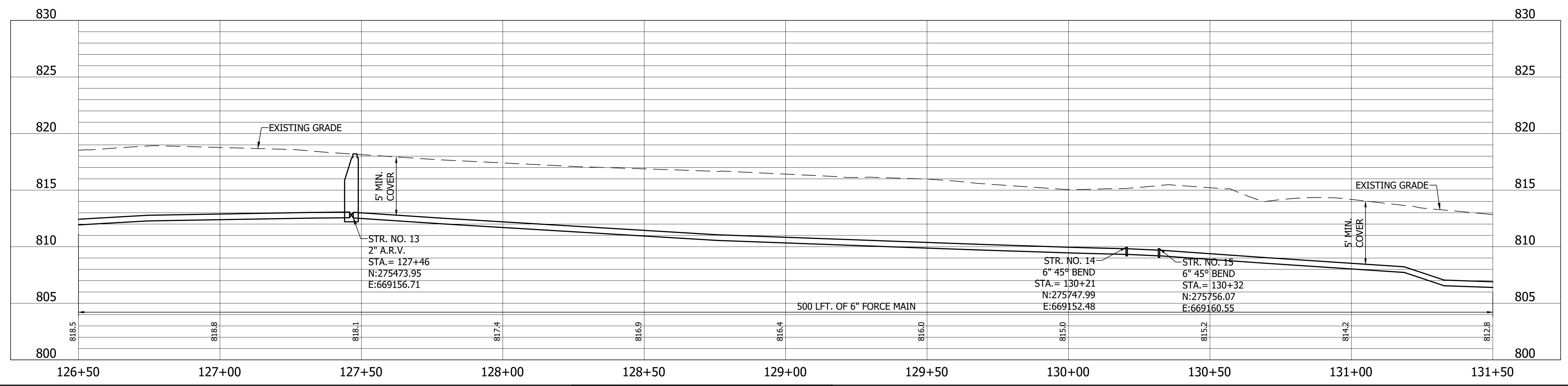
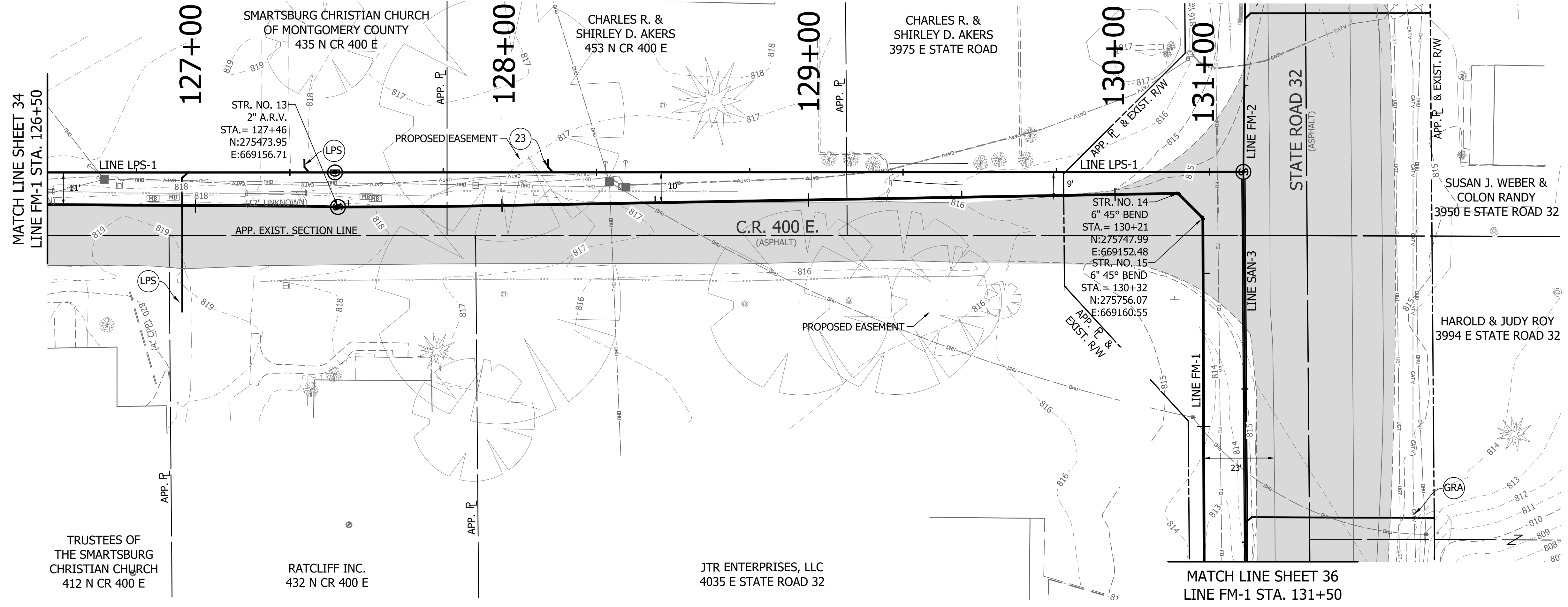
RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED:	KDK	DRAWN:
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S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

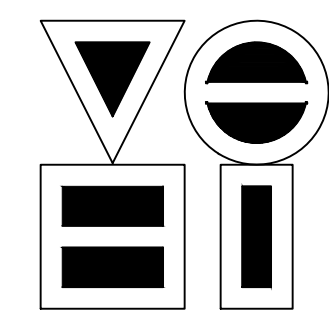
FORCE MAIN - LINE FM-1

PLAN/PROFILE

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	34 of 126
PROJECT	15-3371

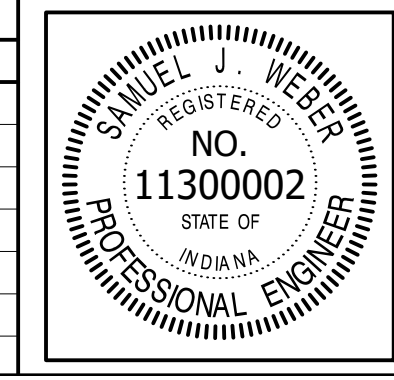


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 FILE: PP LINE FM1-04.dwg
 DIMSCALE: 1/8"=1'-0"
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:37pm



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REVISIONS			
NO.	DATE	DESCRIPTION	BY

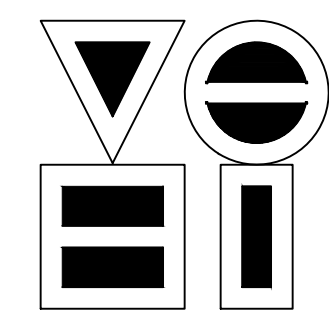
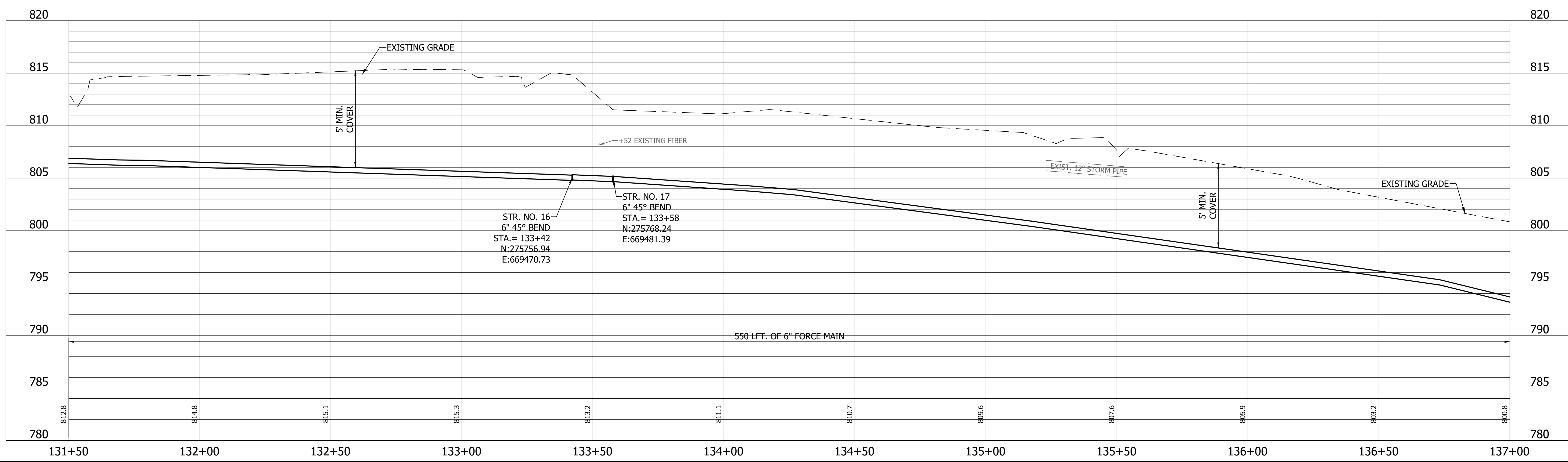
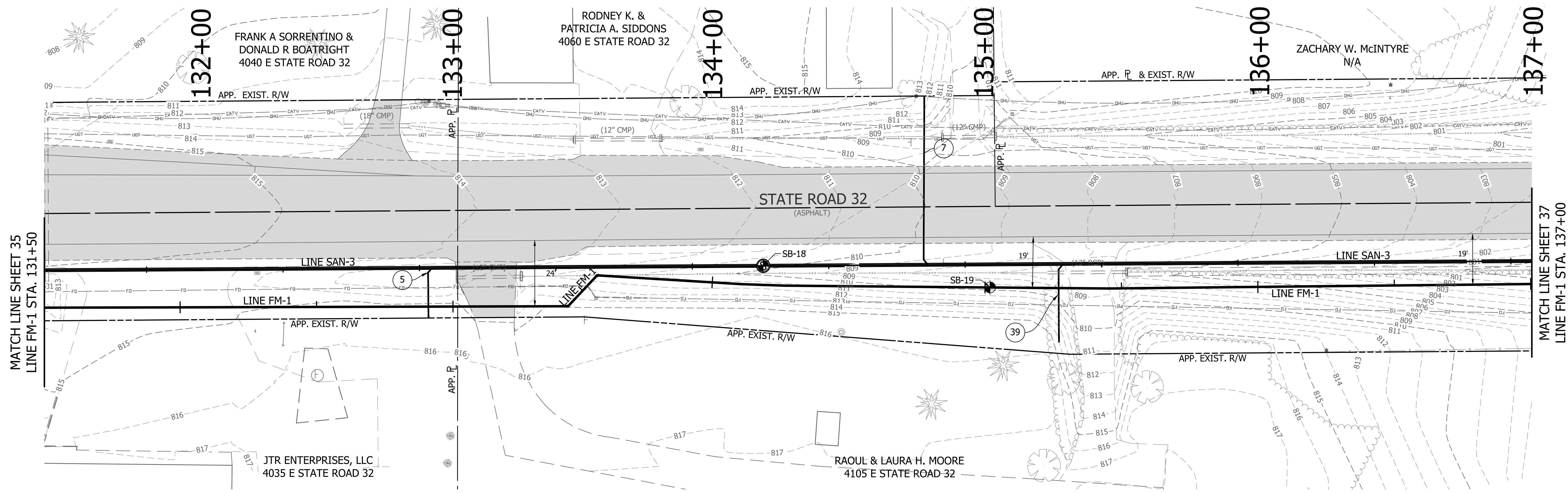


RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
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CHECKED:	SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
FORCE MAIN - LINE FM-1
 PLAN/PROFILE

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	35 of 126
PROJECT	15-3371

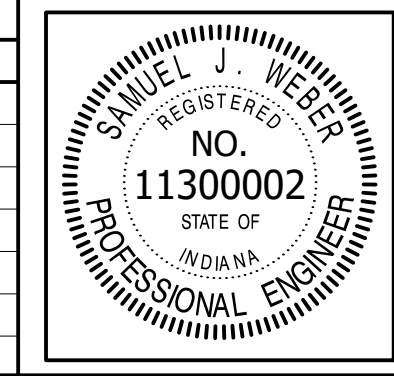
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 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:37pm



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REVISIONS			
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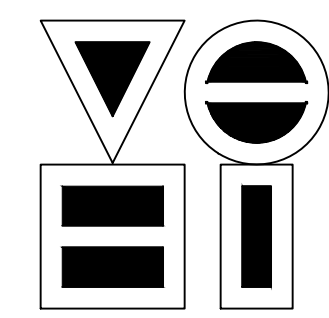
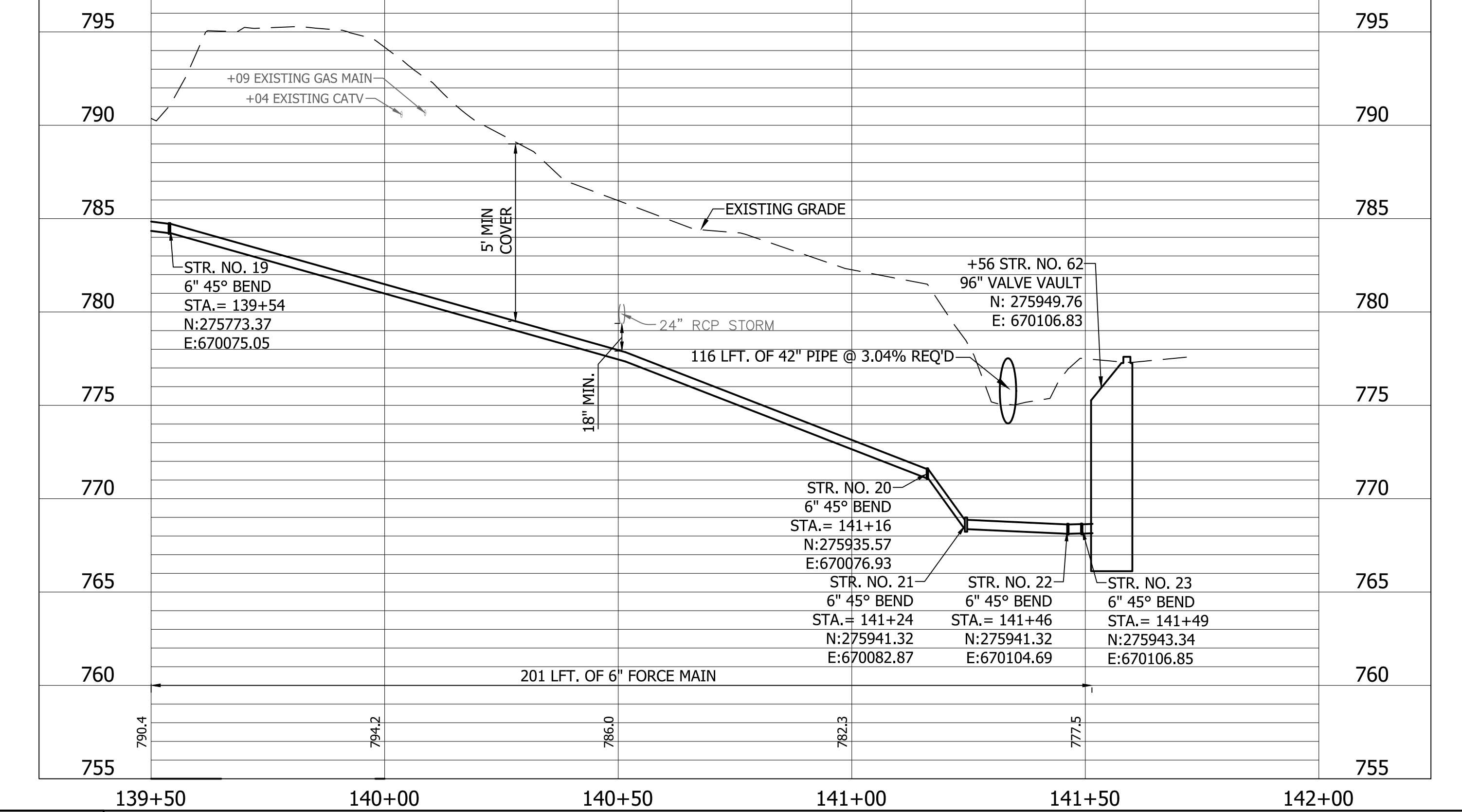
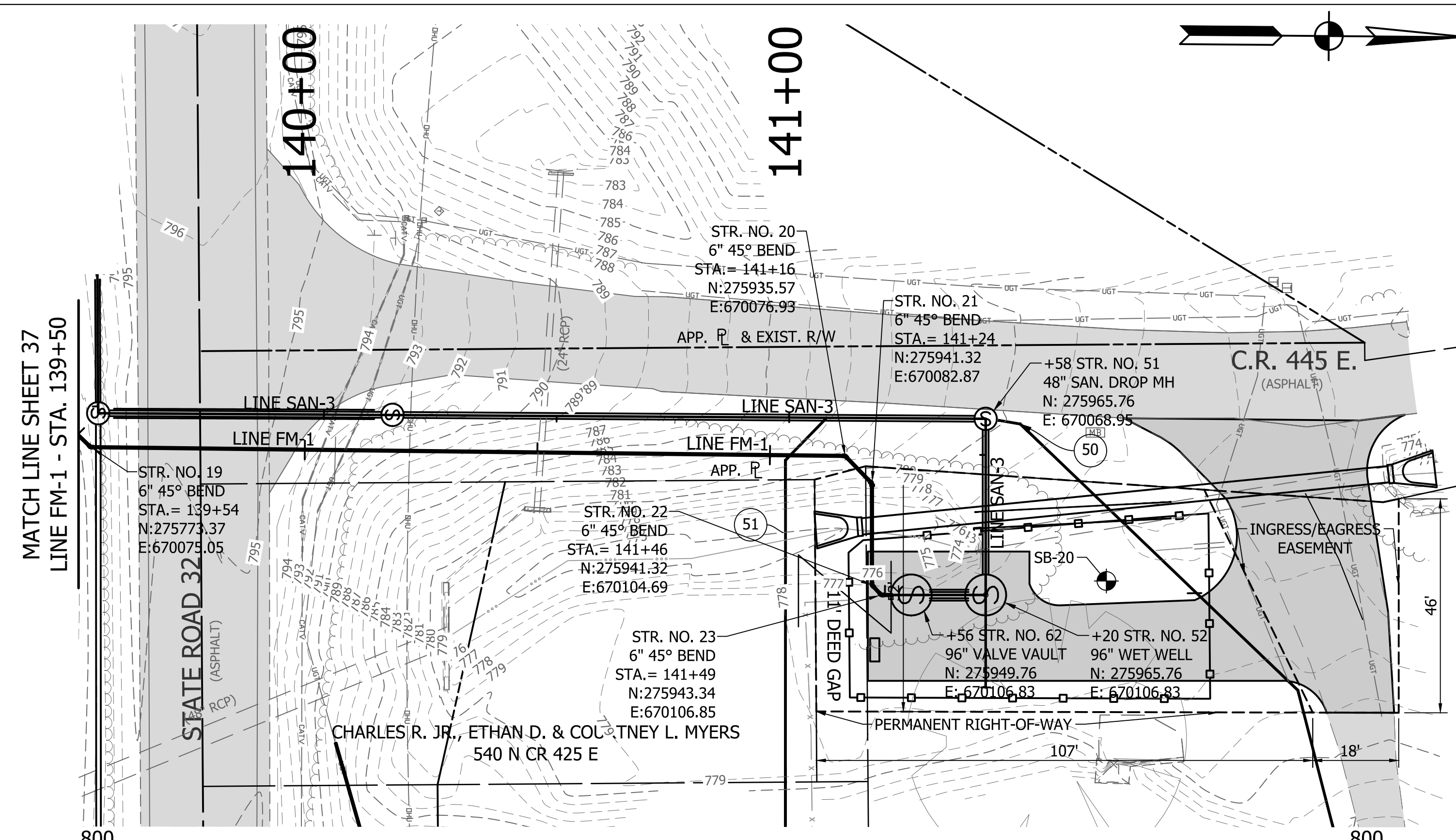
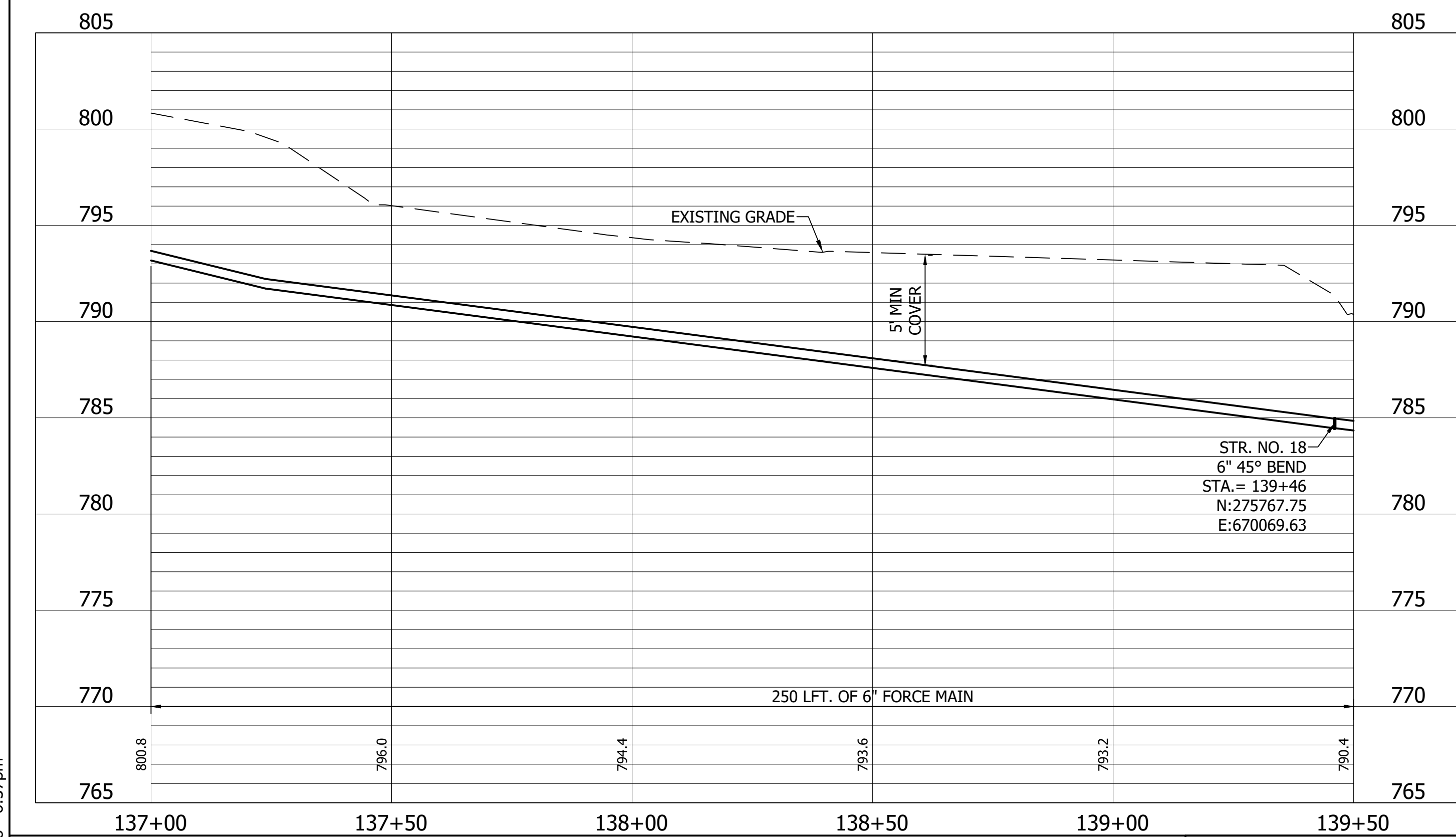
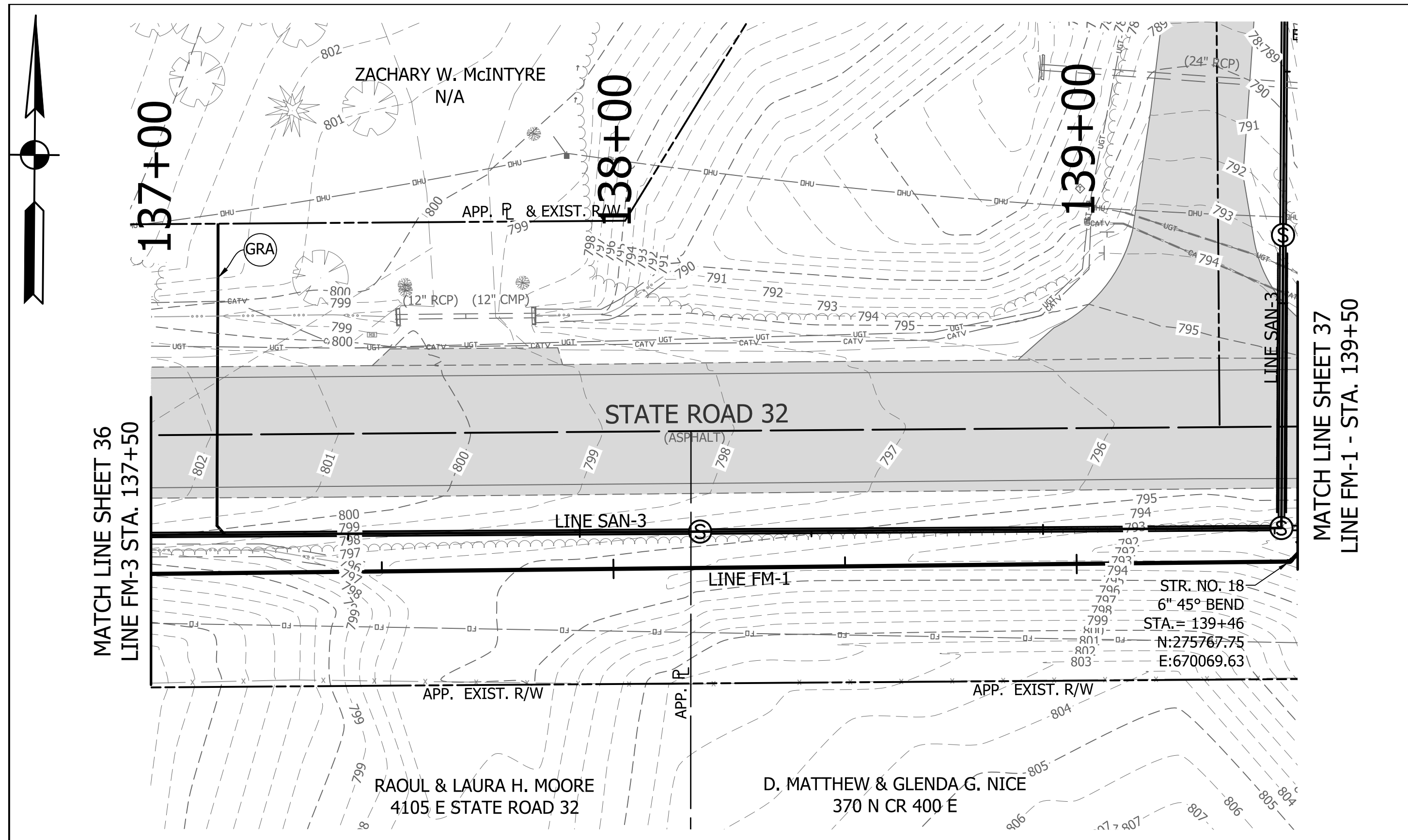


RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED:	KDK	DATE
DRAWN:	KDK	
CHECKED:	SJW	
CHECKED:	SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
FORCE MAIN - LINE FM-1
 PLAN/PROFILE

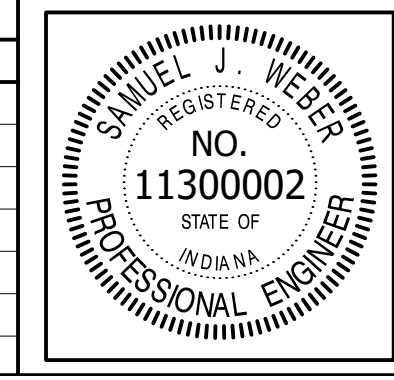
HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	36 of 126
PROJECT	15-3371

DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\03-Plan and Profiles
 FILE: PP LINE FM-1-04.dwg
 DIMSCALE: 1" = 20'
 PLOTTED BY: JMooney
 DATE: Jun 06, 2018 - 6:37pm



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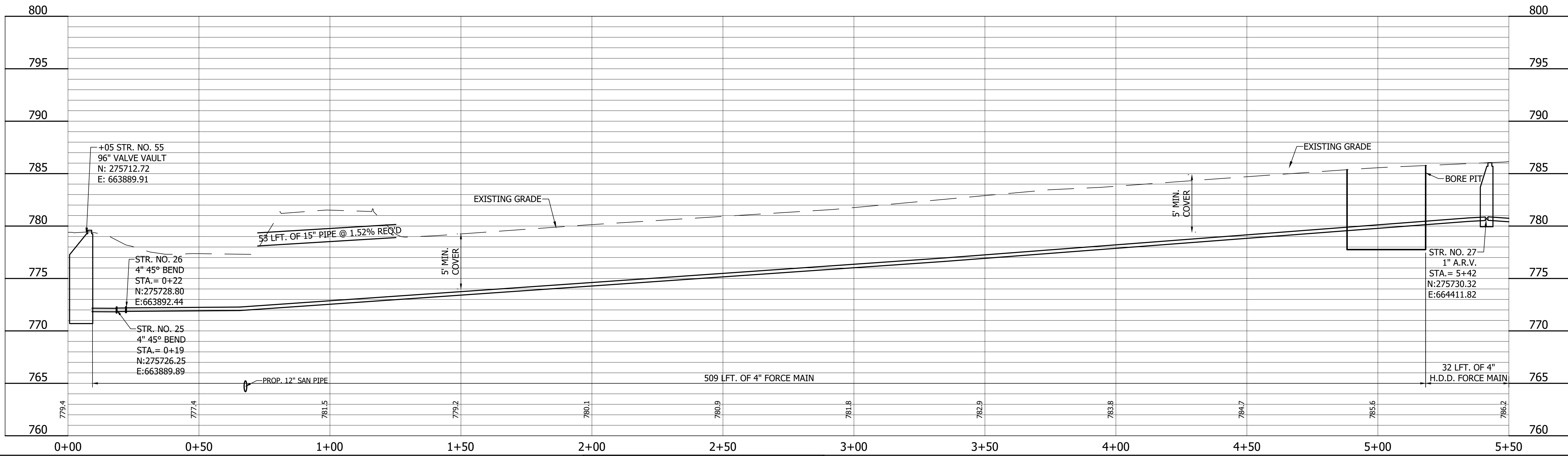
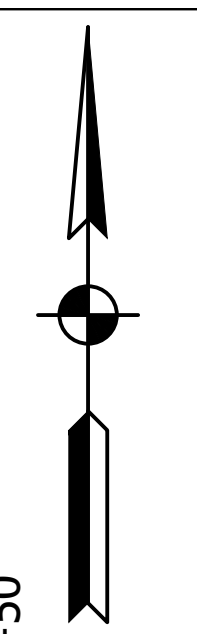
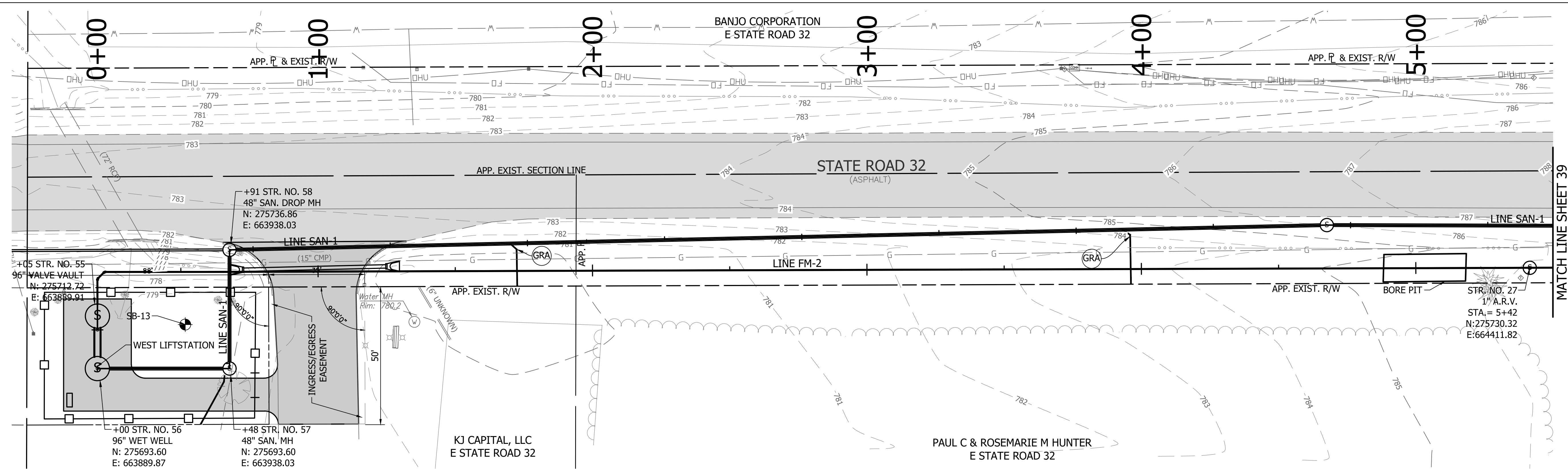
REVISIONS			
NO.	DATE	DESCRIPTION	BY



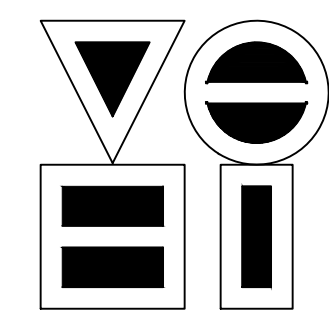
RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED:	KDK	DRAWN:
CHECKED:	SJW	CHECKED:

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
FORCE MAIN - LINE FM-1
PLAN/PROFILE

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	37 of 126
PROJECT	15-3371

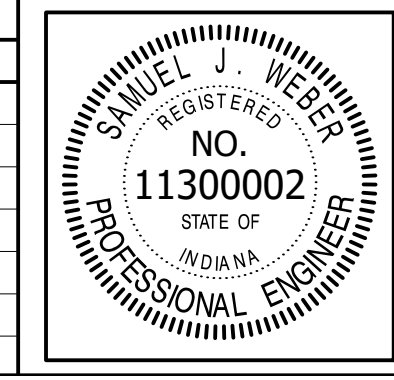


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 FILE: PP LINE FM-2-01.dwg
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 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:38pm



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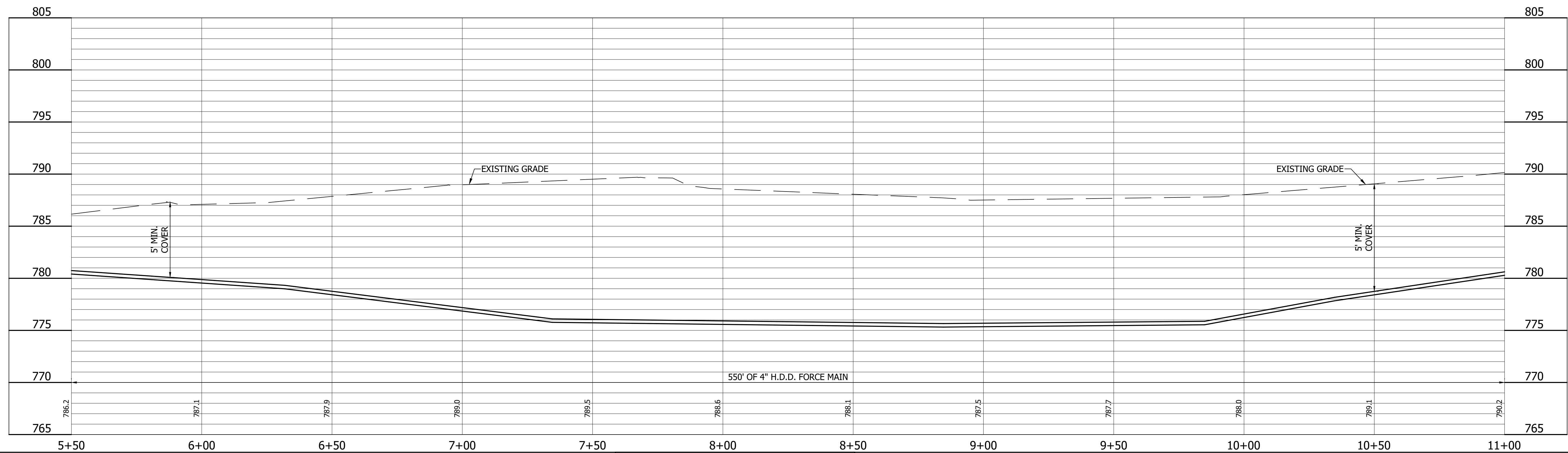
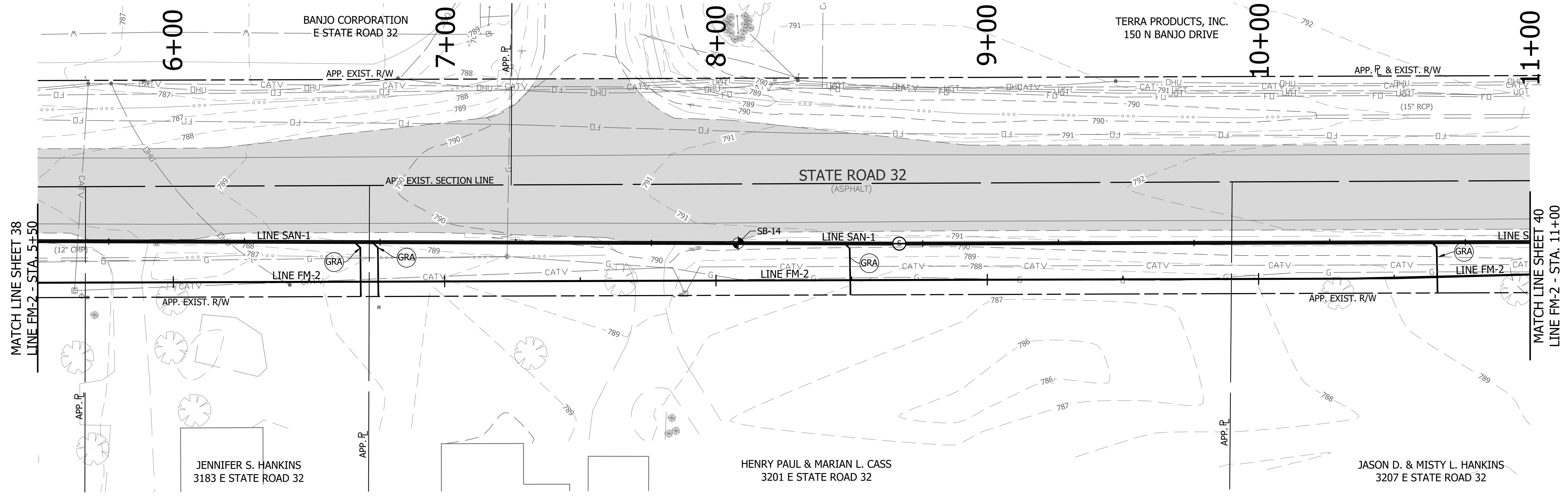
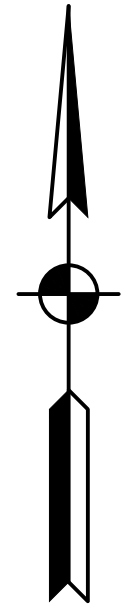
REVISIONS			
NO.	DATE	DESCRIPTION	BY



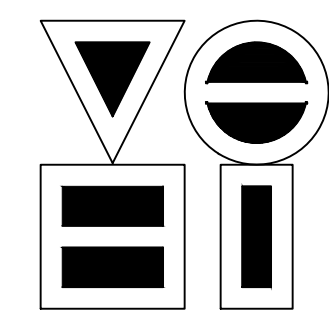
RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED:	KDK	DATE
DRAWN:	KDK	
CHECKED:	SJW	
	CHECKED:	SJW

S.R. 32/NUCOR RD. AREA SANITARY SEWER
 COLLECTION SYSTEM
FORCE MAIN - LINE FM-2
 PLAN/PROFILE

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	38 of 126
PROJECT	15-3371

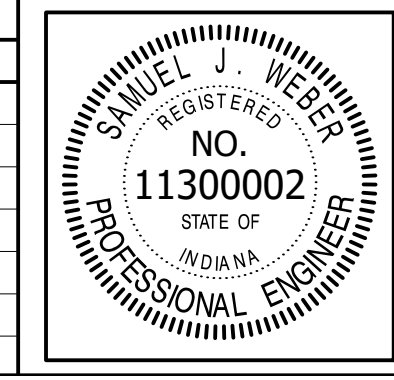


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 FILE: PP LINE FM-2-01.dwg
 DIMSCALE: 1/4" = 1' LTSCALE: 20
 PLOTTED BY: JMooney
 DATE: Jun 06, 2018 - 6:38pm



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 4275 North High School Road Indianapolis, Indiana 46254
 vse@vsengineering.com www.vsengineering.com
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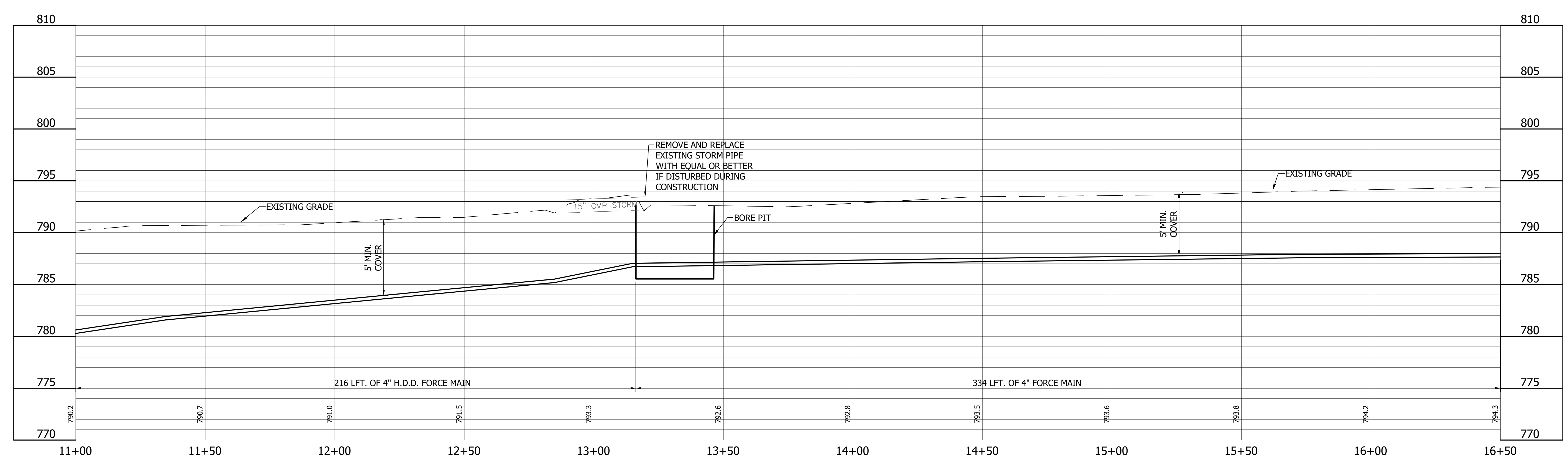
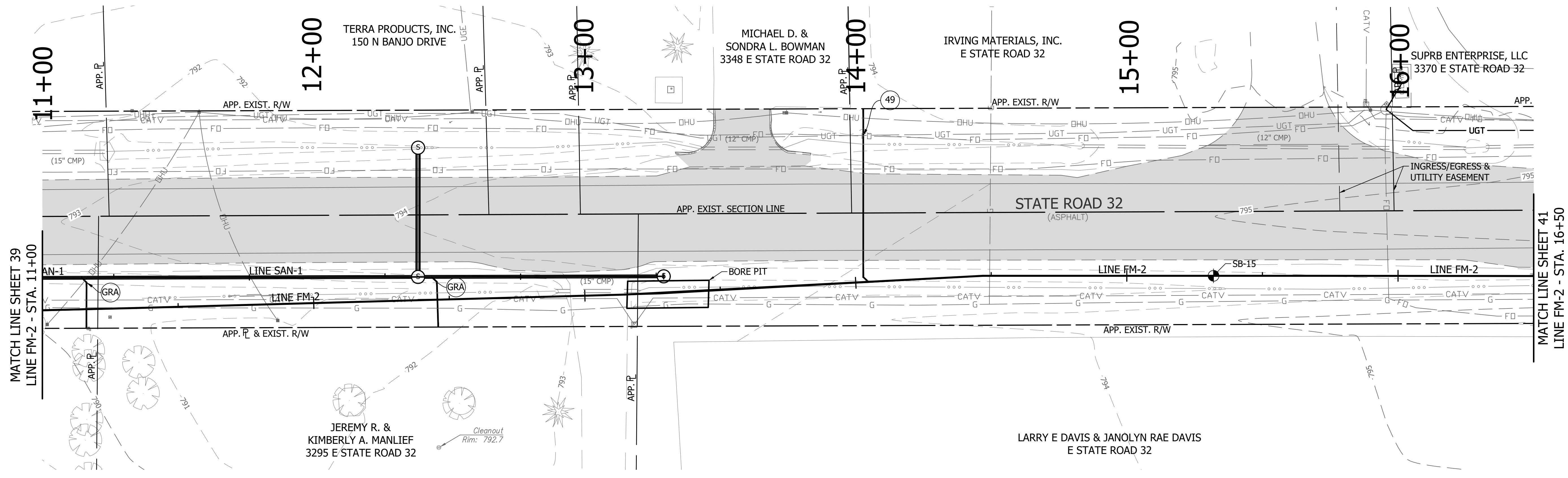
REVISIONS			
NO.	DATE	DESCRIPTION	BY



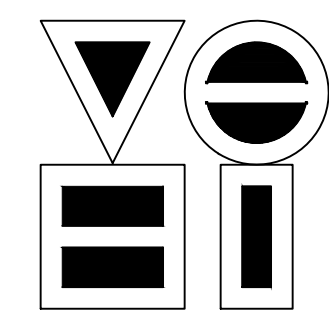
RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED: KDK	DRAWN: KDK	DATE
CHECKED: SJW	CHECKED: SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
FORCE MAIN - LINE FM-2
 PLAN/PROFILE

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	39 of 126
PROJECT	15-3371

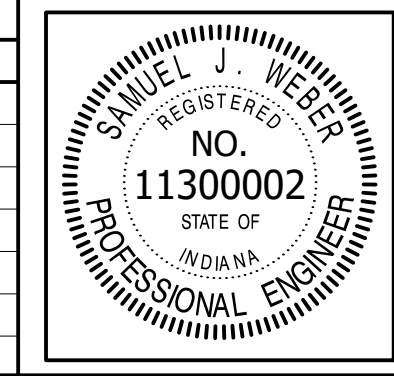


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 FILE:PP LINE FM2-01.dwg
 DIMSCALE: 1/4" = 1' LTSCALE: 20
 PLOTTED BY: JMowery
 DATE:Jun 06, 2018 - 6:39pm



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 4275 North High School Road Indianapolis, Indiana 46254
 vse@vsengineering.com www.vsengineering.com
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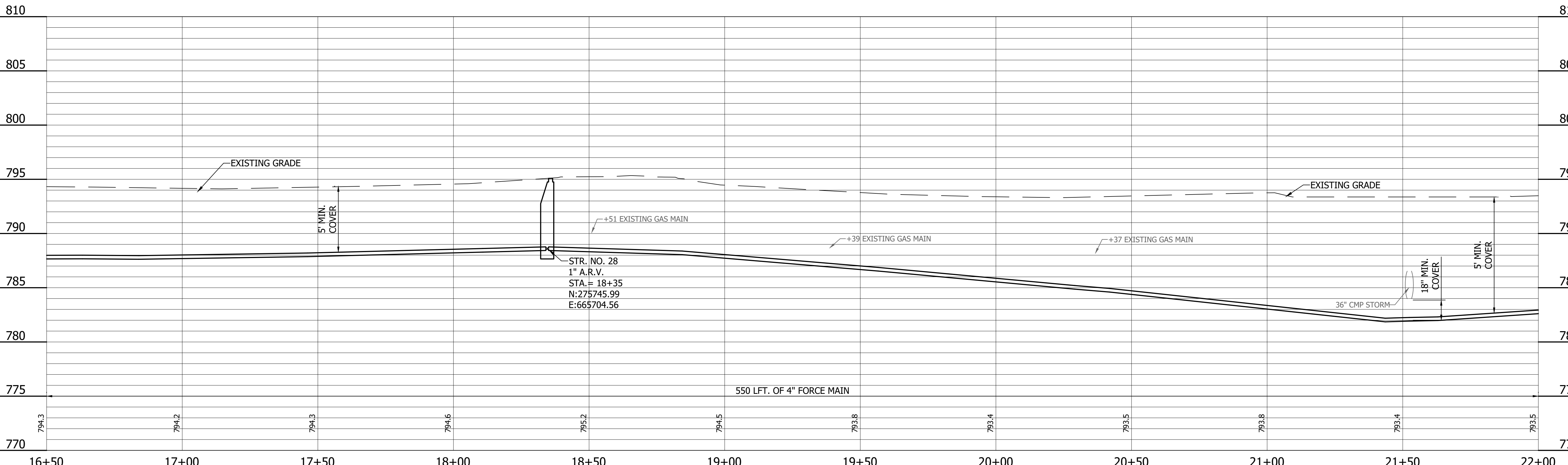
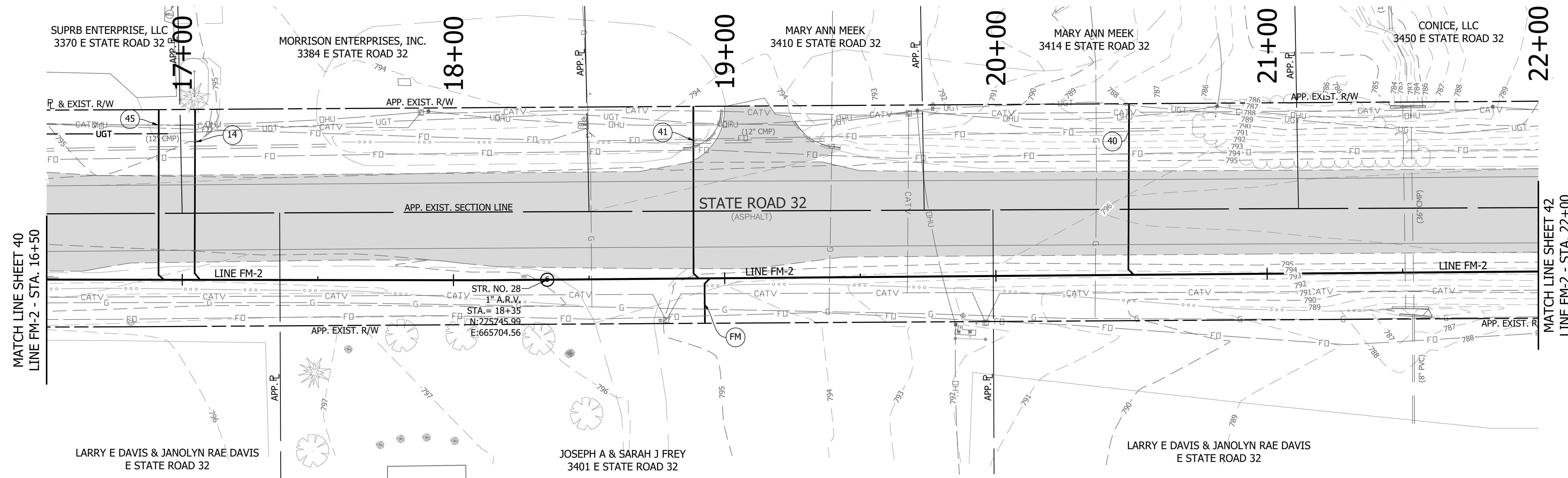
REVISIONS			
NO.	DATE	DESCRIPTION	BY



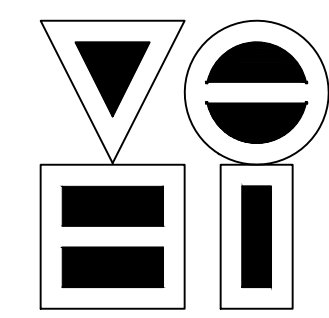
RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED:	KDK	DATE
DRAWN:	KDK	
CHECKED:	SJW	
	CHECKED:	SJW

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
FORCE MAIN - LINE FM-2
 PLAN/PROFILE

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	40 of 126
PROJECT	15-3371

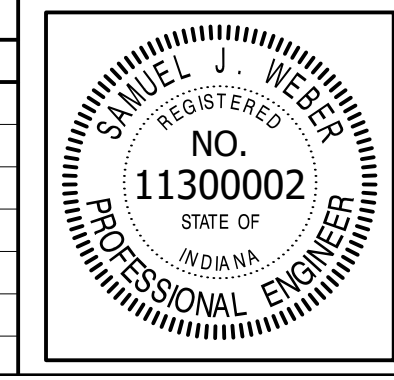


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 DIMSCALE: 1/8" = 1' LTSCALE: 20
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:39pm



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 4275 North High School Road Indianapolis, Indiana 46254
 vse@vsengineering.com www.vsengineering.com
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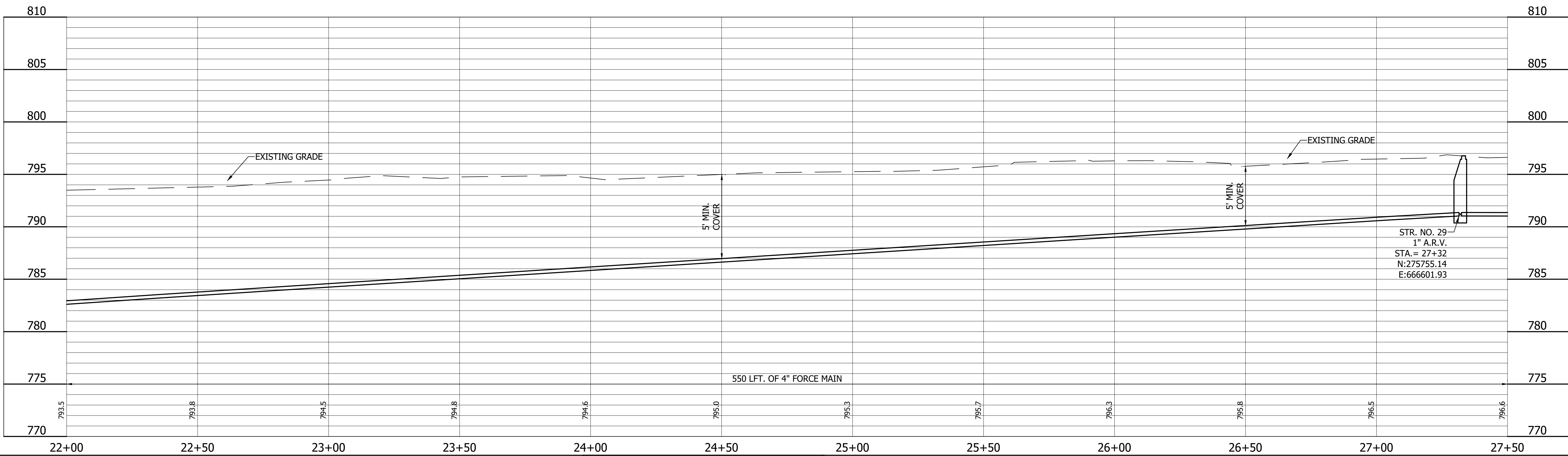
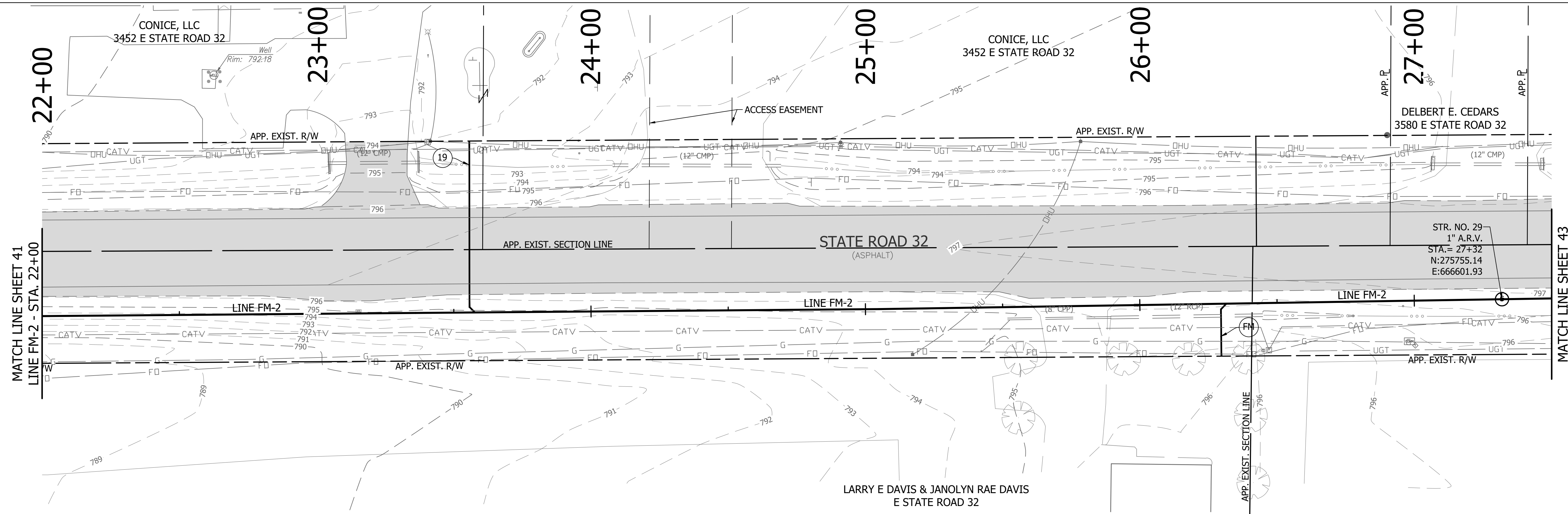
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NO.	DATE	DESCRIPTION	BY



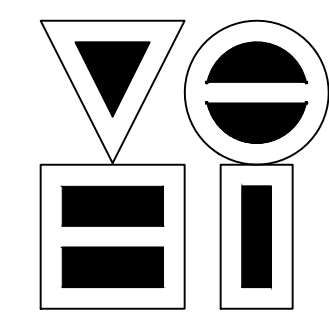
RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED: KDK	DRAWN: KDK	DATE
CHECKED: SJW	CHECKED: SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
FORCE MAIN - LINE FM-2
PLAN/PROFILE

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	41 of 126
PROJECT	15-3371

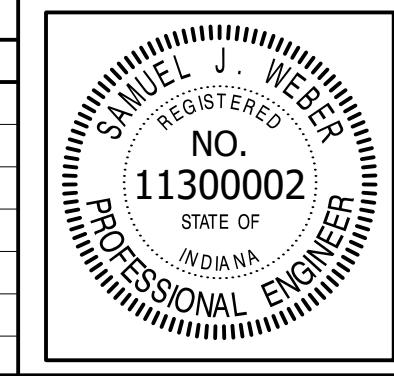


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 FILE: PP LINE FM-2-01.dwg
 DIMSCALE: 1/4" = 1' LTSCALE: 20
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:39pm



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 4275 North High School Road Indianapolis, Indiana 46254
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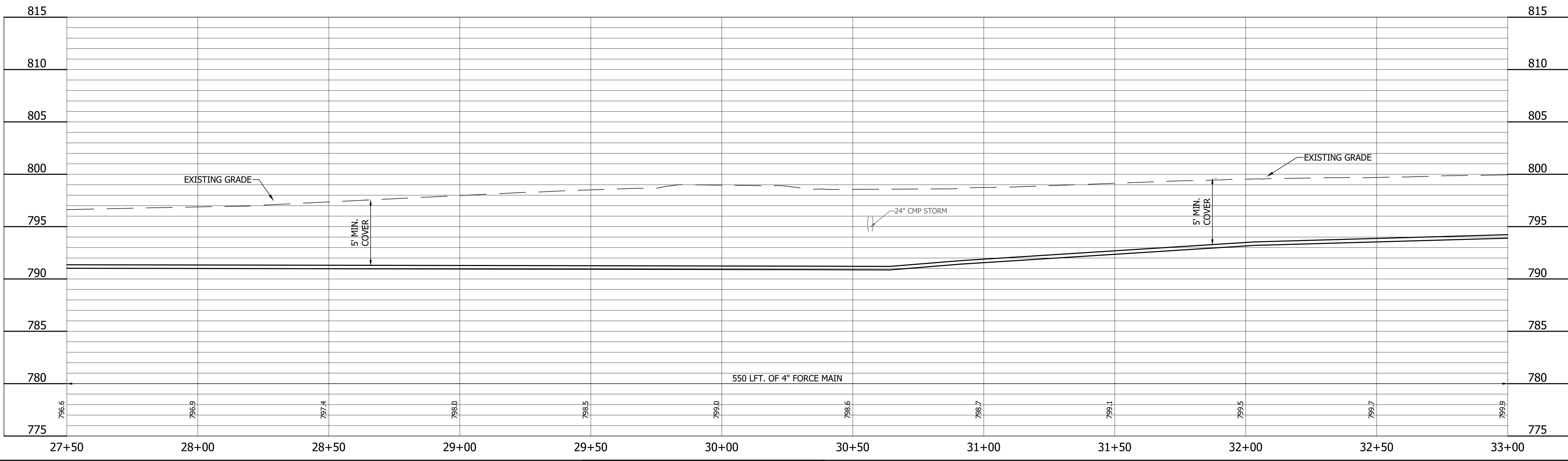
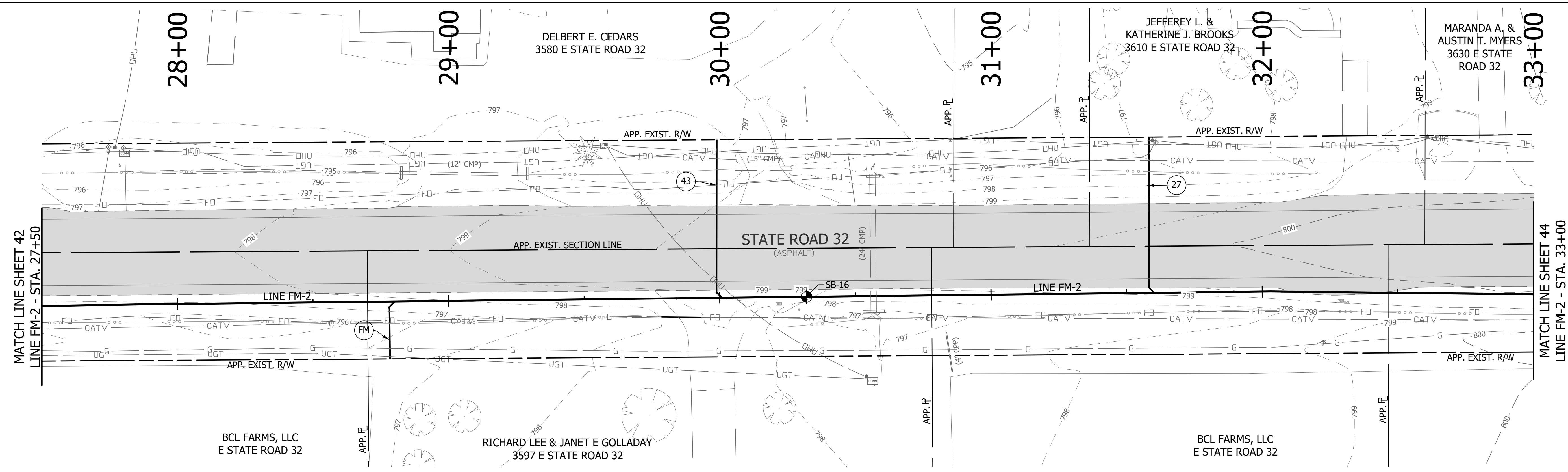
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NO.	DATE	DESCRIPTION	BY



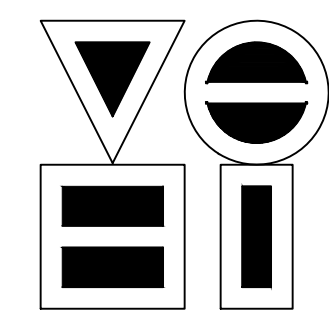
RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED:	KDK	DRAWN:
CHECKED:	SJW	CHECKED:

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
FORCE MAIN - LINE FM-2
 PLAN/PROFILE

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	42 of 126
PROJECT	15-3371

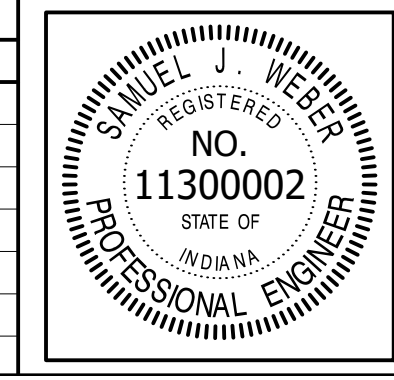


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 FILE: ...PP LINE FM-2-01.dwg
 DIMSCALE: 1/4" = 1' LTSCALE: 20
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:39pm



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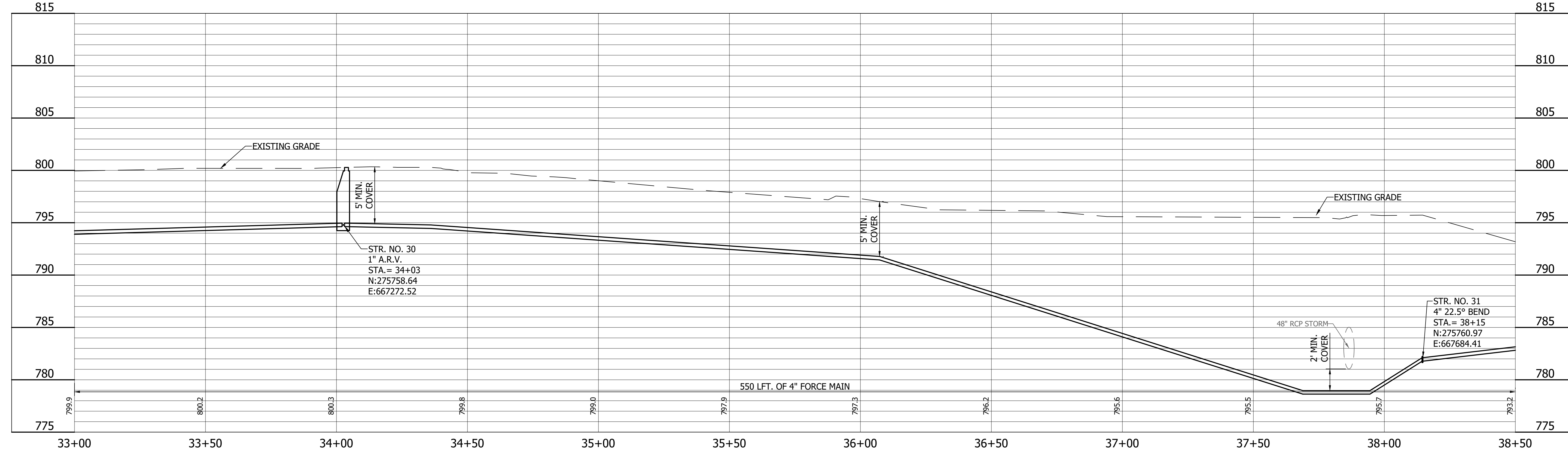
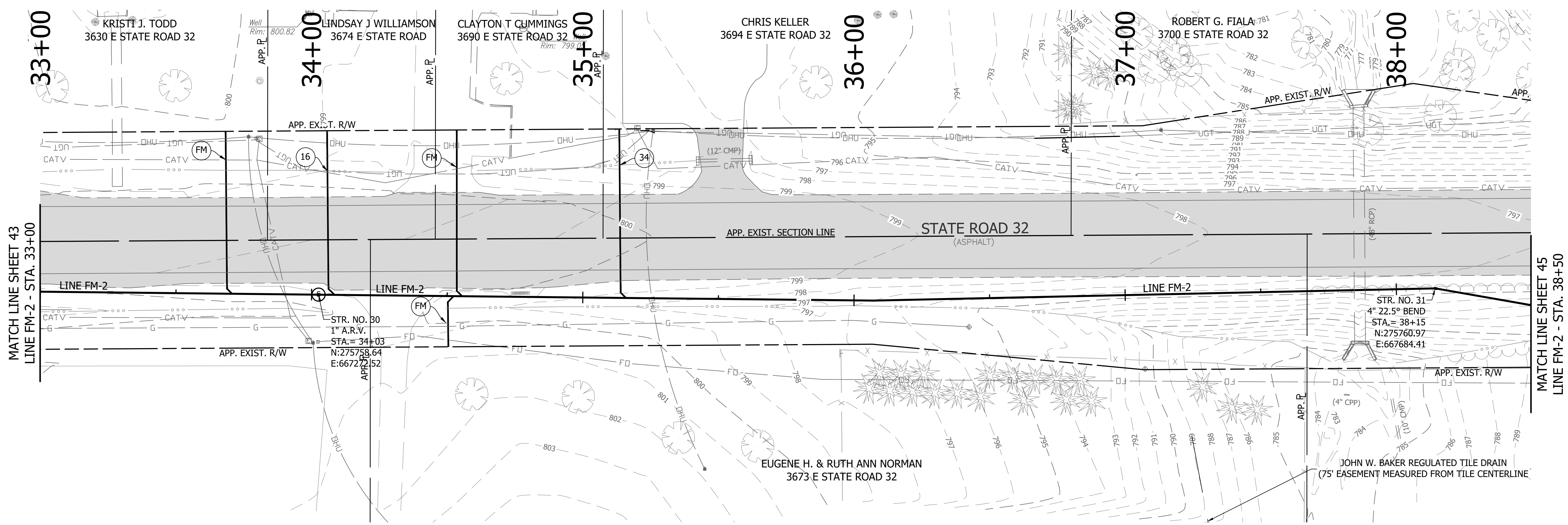
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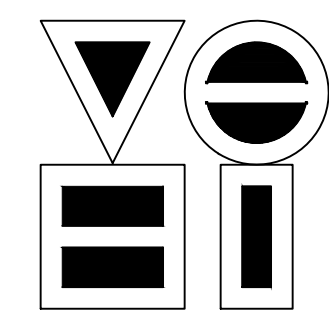
RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED: KDK	DRAWN: KDK	DATE
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S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
FORCE MAIN - LINE FM-2
 PLAN/PROFILE

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	43 of 126
PROJECT	15-3371

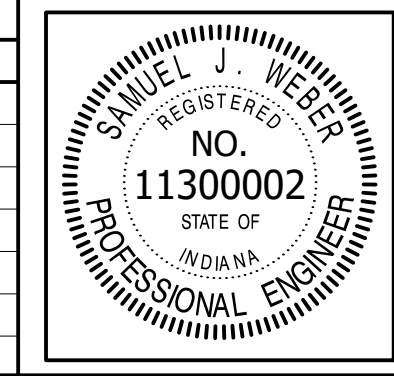


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 FILE: PP LINE FM-2-01.dwg
 DIMSCALE: 1/8" = 1' LTSCALE: 20
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:40pm



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 4275 North High School Road Indianapolis, Indiana 46254
 vse@vsengineering.com www.vsengineering.com
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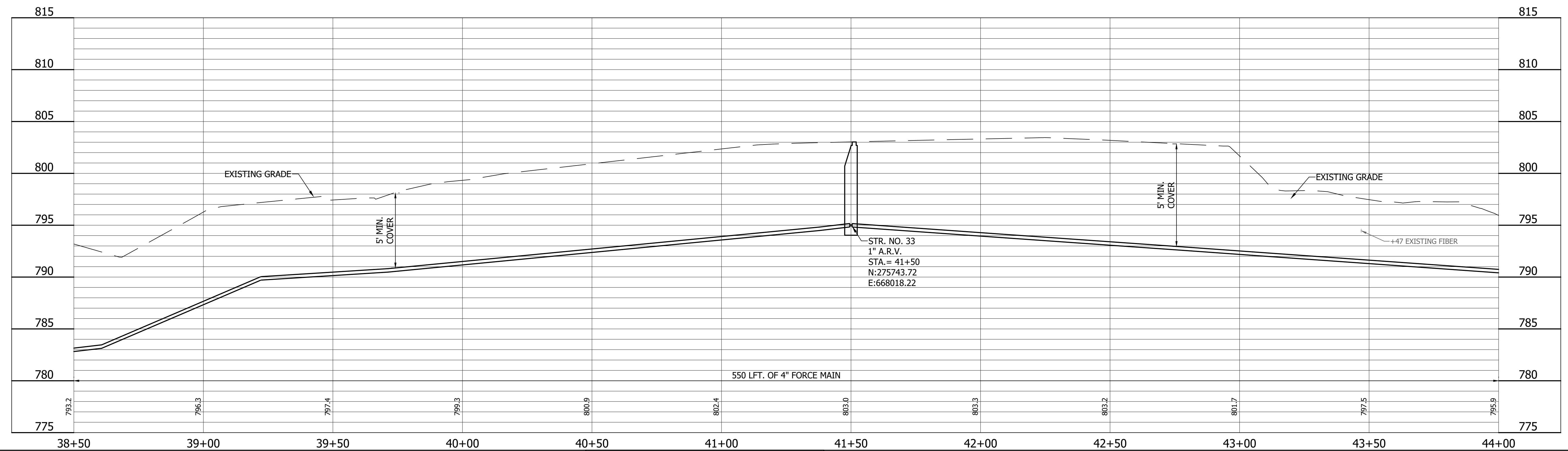
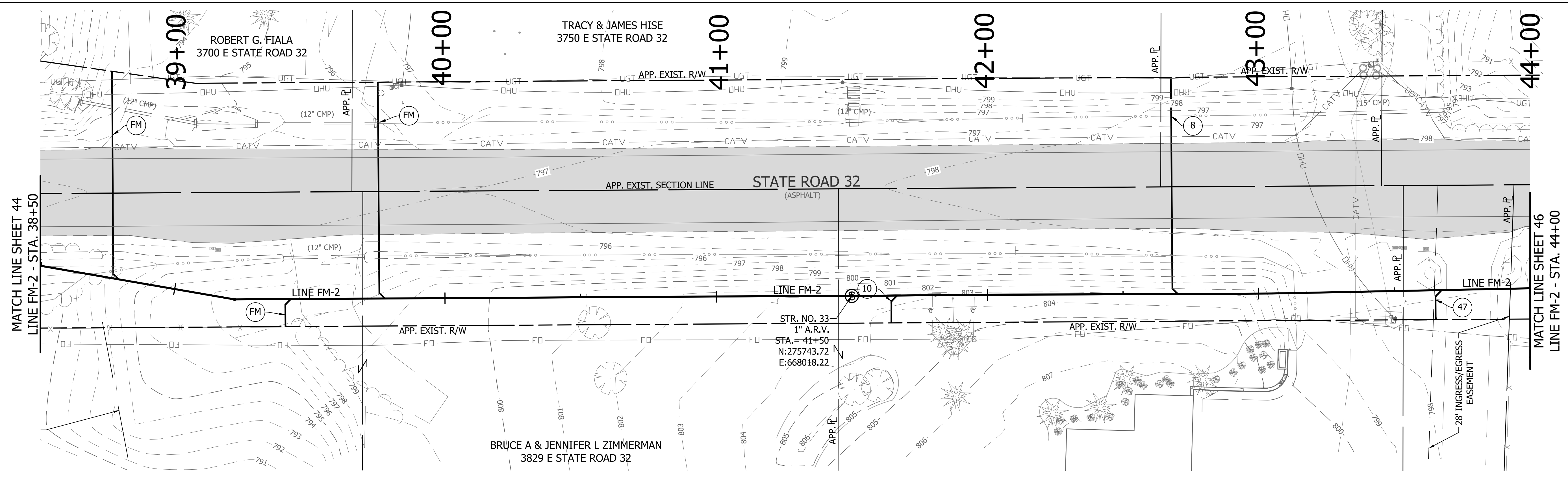
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NO.	DATE	DESCRIPTION	BY



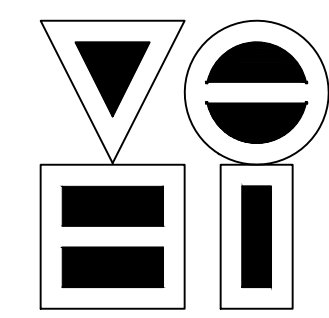
RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED: KDK	DRAWN: KDK	DATE
CHECKED: SJW	CHECKED: SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
FORCE MAIN - LINE FM-2
PLAN/PROFILE

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	44 of 126
PROJECT	15-3371

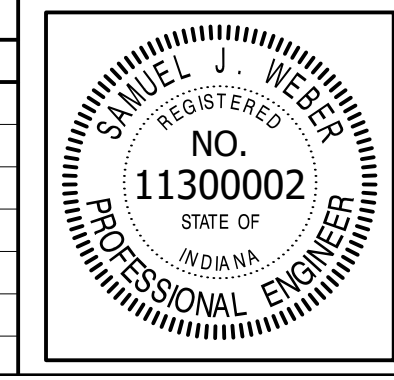


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 FILE: PP LINE FM2-02.dwg
 DIMSCALE: 1/8" = 1' LTSCALE: 20
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:40pm



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 4275 North High School Road Indianapolis, Indiana 46254
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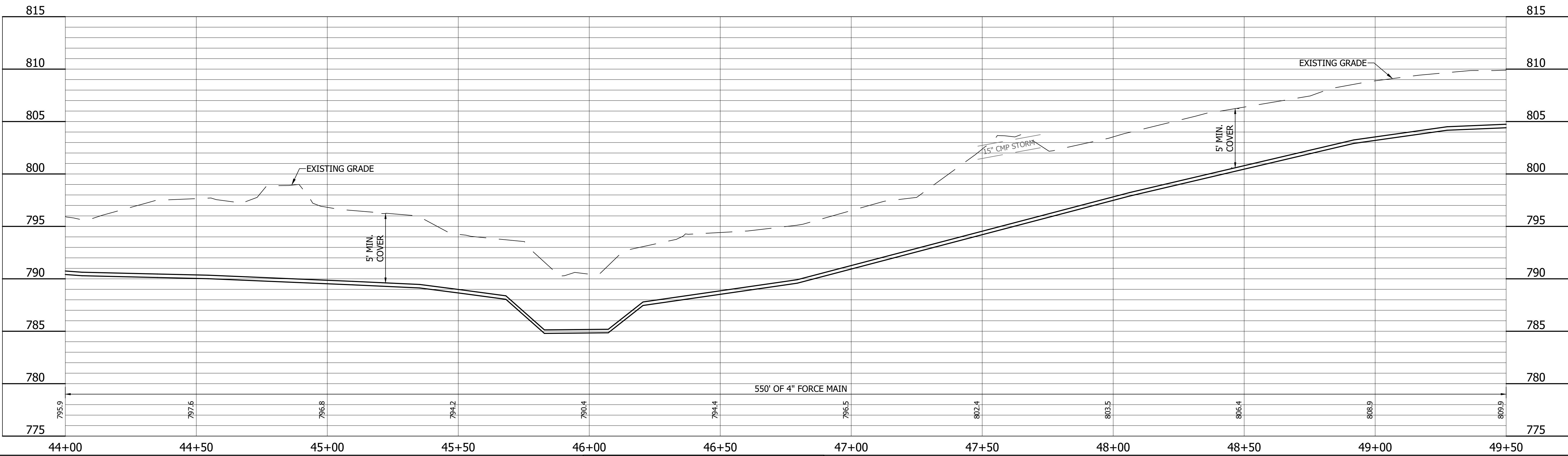
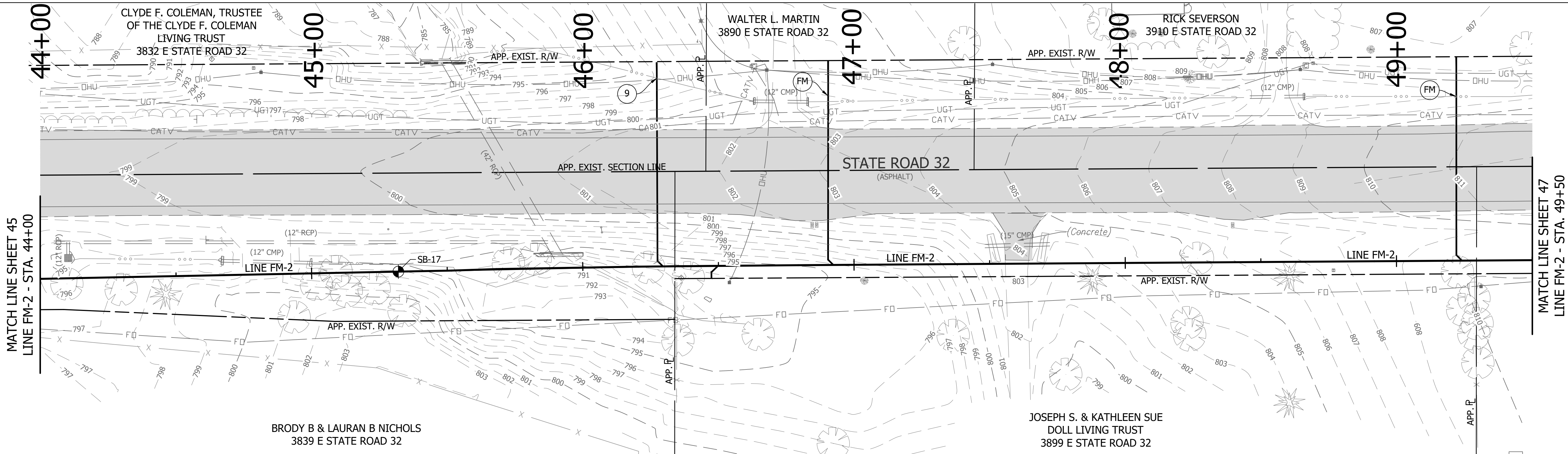
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NO.	DATE	DESCRIPTION	BY



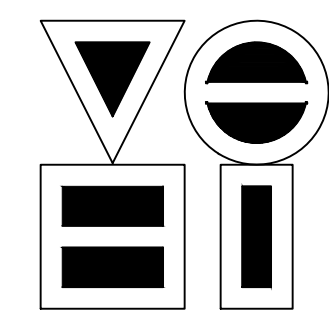
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DESIGNED:	KDK	DRAWN:
CHECKED:	SJW	CHECKED:

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
FORCE MAIN - LINE FM-2
 PLAN/PROFILE

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	45 of 126
PROJECT	15-3371

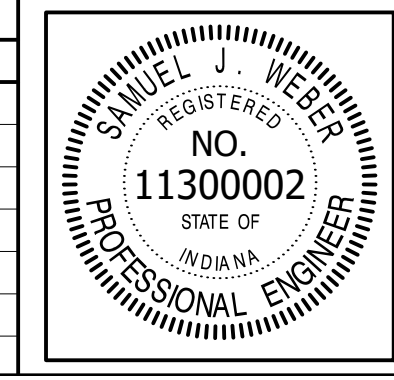


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 DIMSCALE: 1/4" = 1' LTSCALE: 20
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:41pm



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 vse@vsengineering.com www.vsengineering.com
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REVISIONS			
NO.	DATE	DESCRIPTION	BY

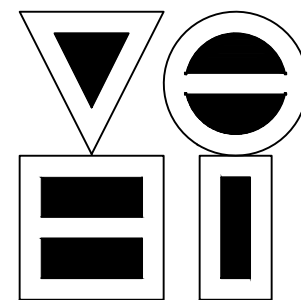
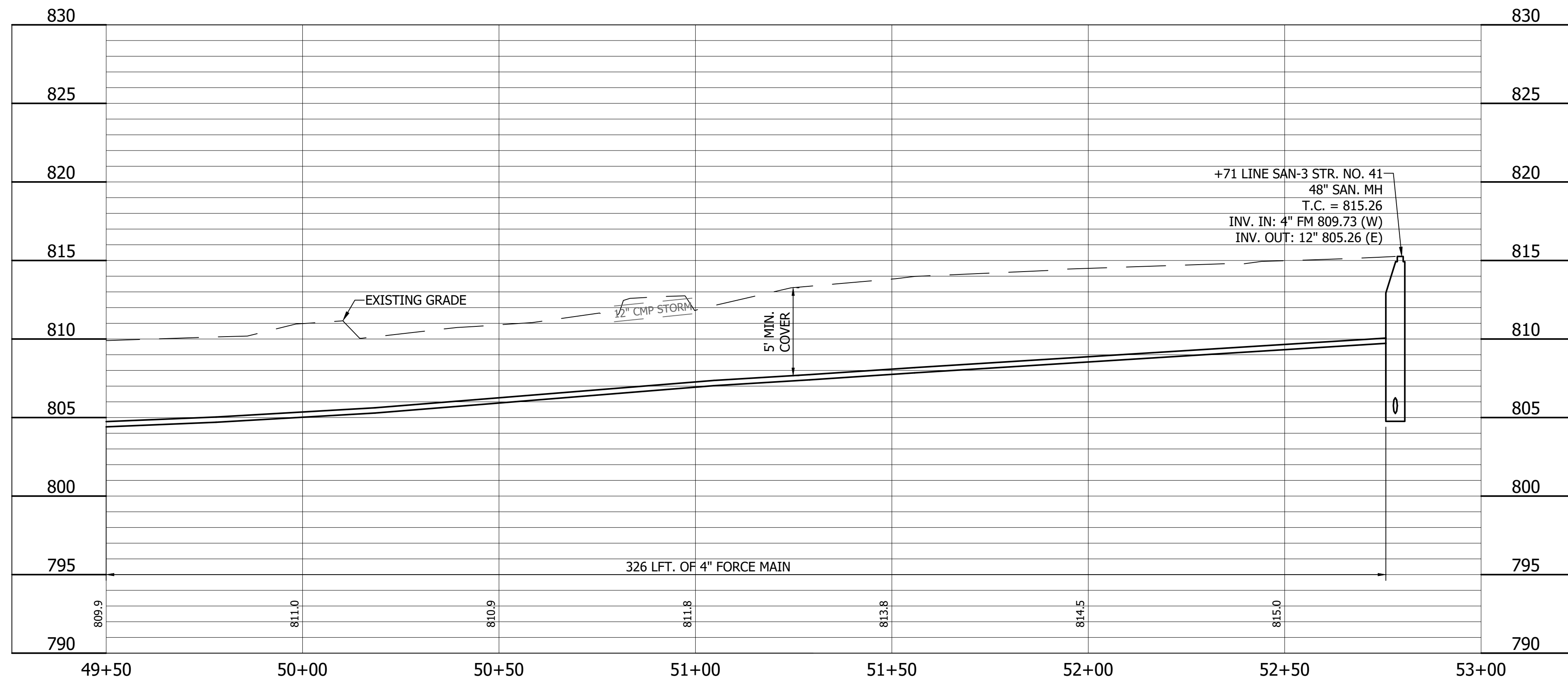
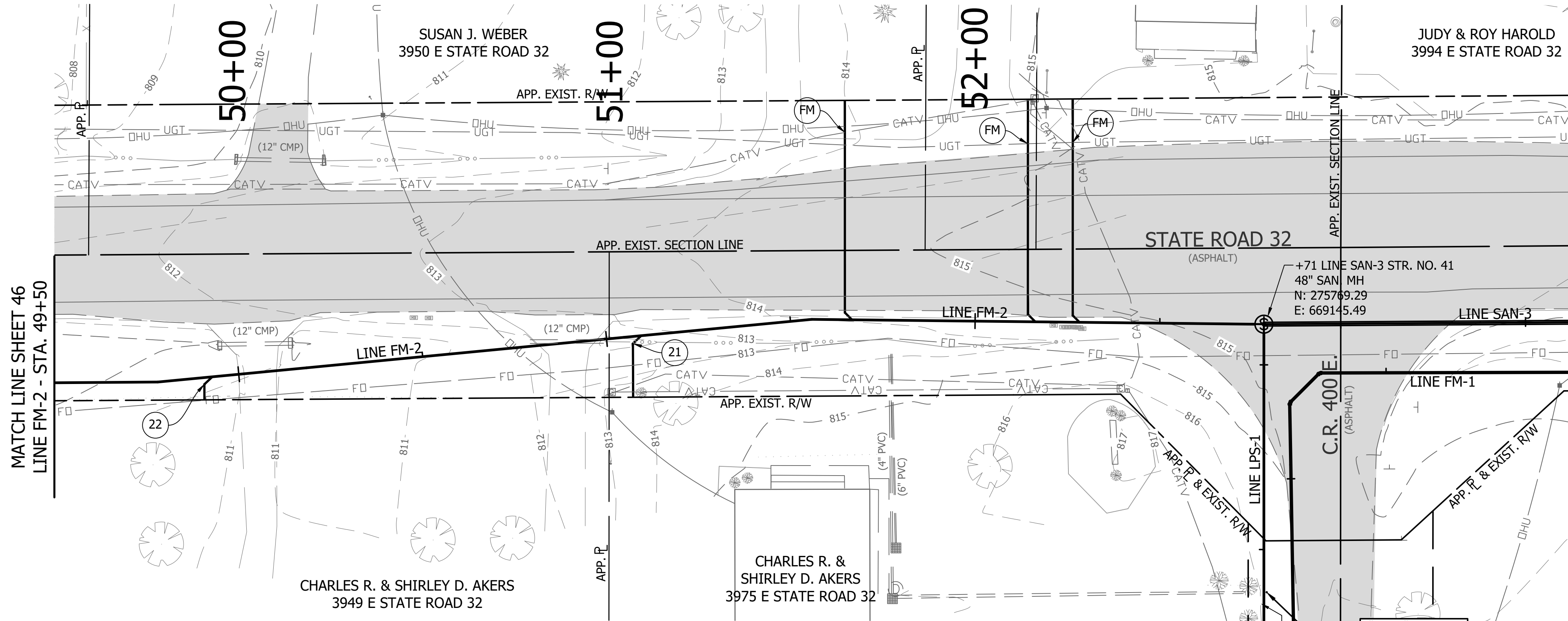


RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED:	KDK	DRAWN:
CHECKED:	SJW	CHECKED:

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
FORCE MAIN - LINE FM-2
 PLAN/PROFILE

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	46 of 126
PROJECT	15-3371

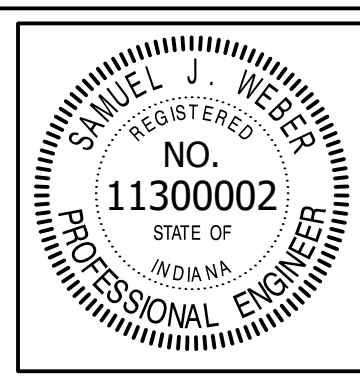
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 FILE:PP LINE FM2-02.dwg
 DIMSCALE: 1" = 20'
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:41pm



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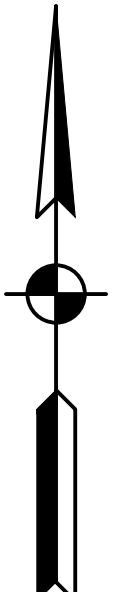
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NO.	DATE	DESCRIPTION	BY

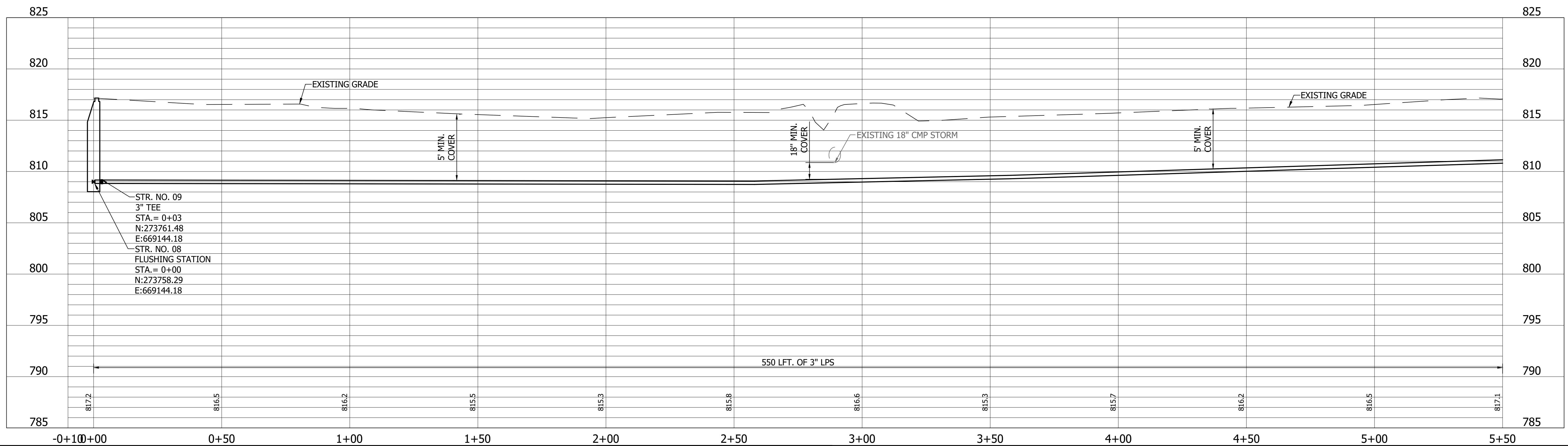
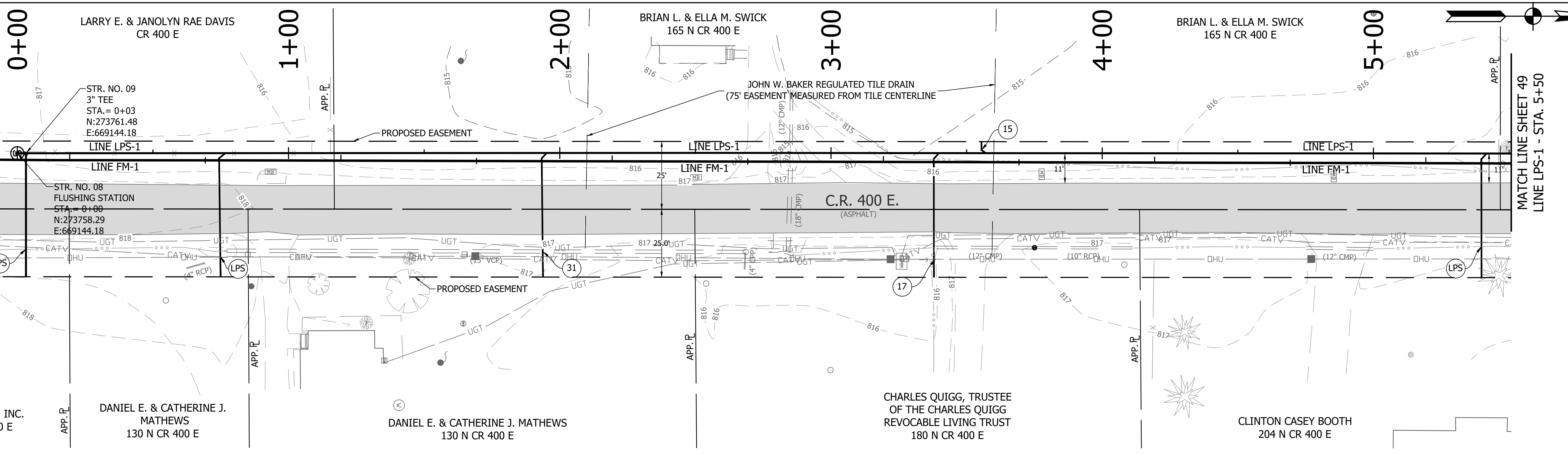


RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	DESIGN ENGINEER	DATE
			06/07/18
DESIGNED: KDK	DRAWN: KDK		
CHECKED: SJW	CHECKED: SJW		

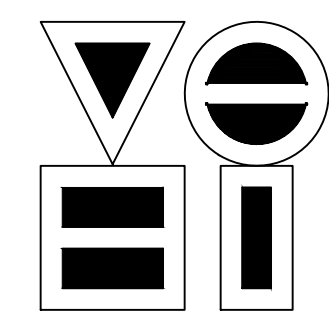
S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM	
FORCE MAIN - LINE FM-2 PLAN/PROFILE	

HORIZONTAL SCALE	
1" = 20'	
VERTICAL SCALE	
1" = 5'	
SHEETS	
47	of 126
PROJECT	
15-3371	



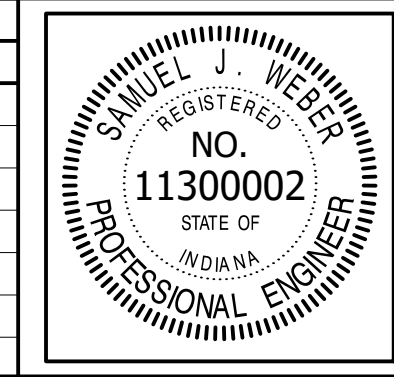


DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\03-Plan and Profiles\
 FILE: ... PP LINE LPS-1.dwg
 DIMSCALE: 1"=20'
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:42pm



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 vse@vsengineering.com www.vsengineering.com
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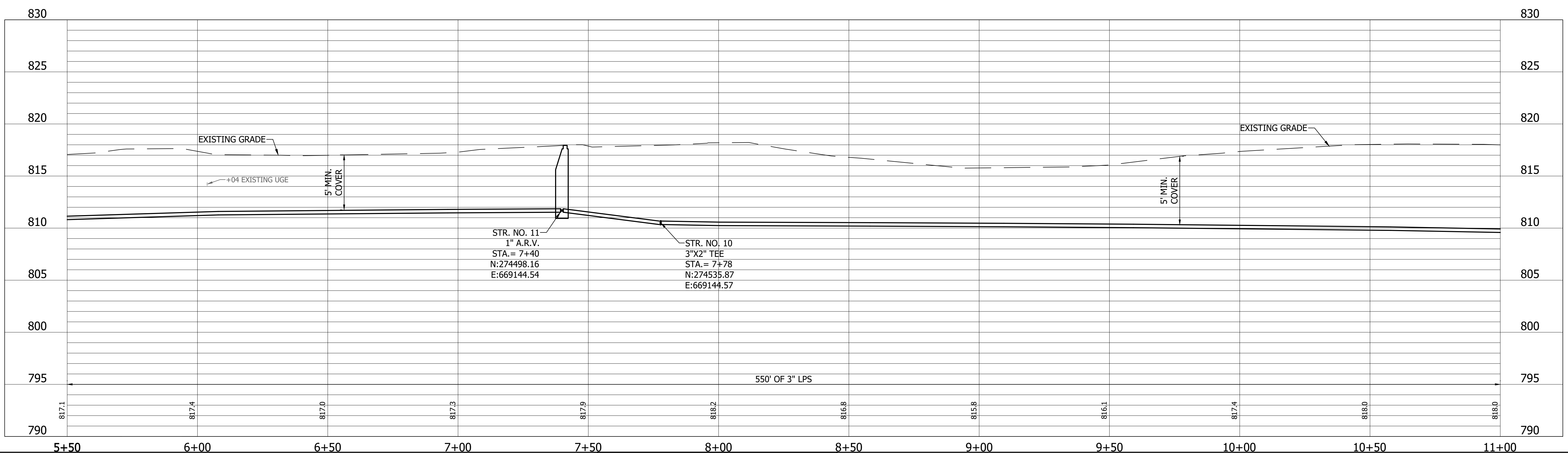
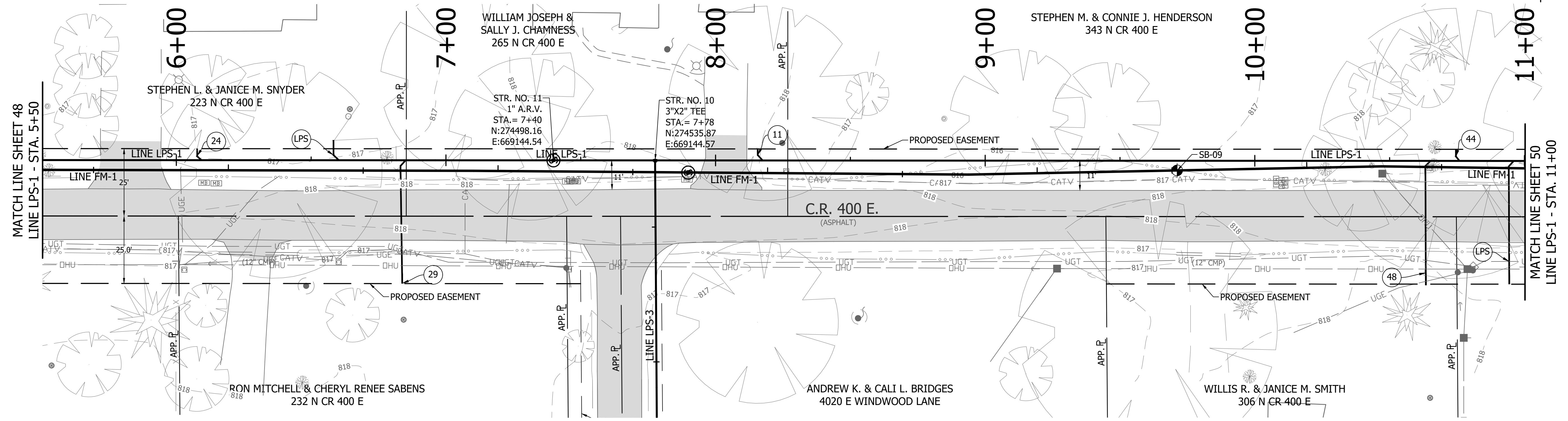
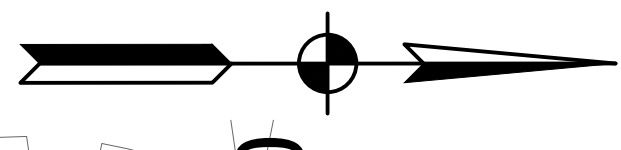
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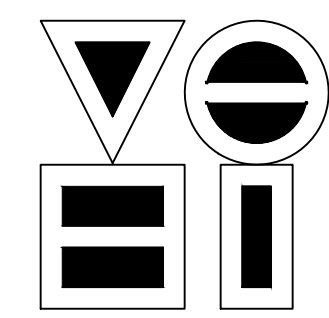
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CHECKED:	SJW	CHECKED:

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
FORCE MAIN - LINE LPS-1
 PLAN/PROFILE

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	48 of 126
PROJECT	15-3371

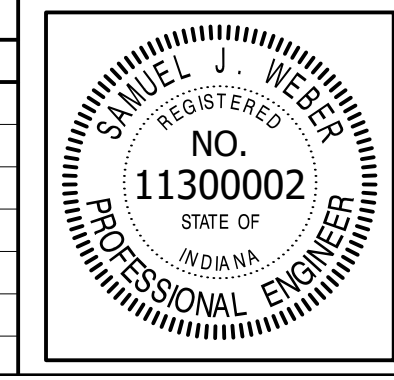


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 FILE: PP LINE LPS-1.dwg
 DIMSCALE: 1/8"=1'-0"
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:42pm



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REVISIONS			
NO.	DATE	DESCRIPTION	BY

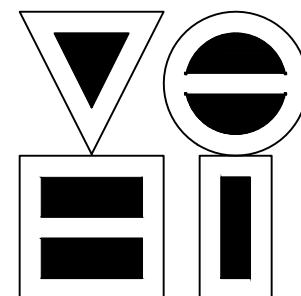
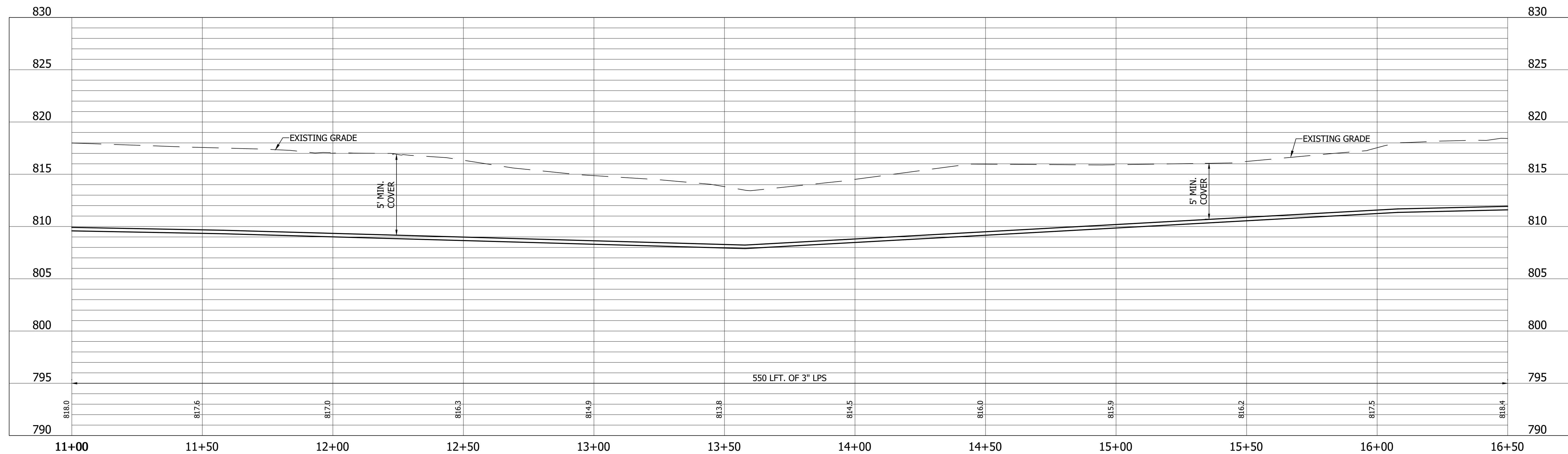
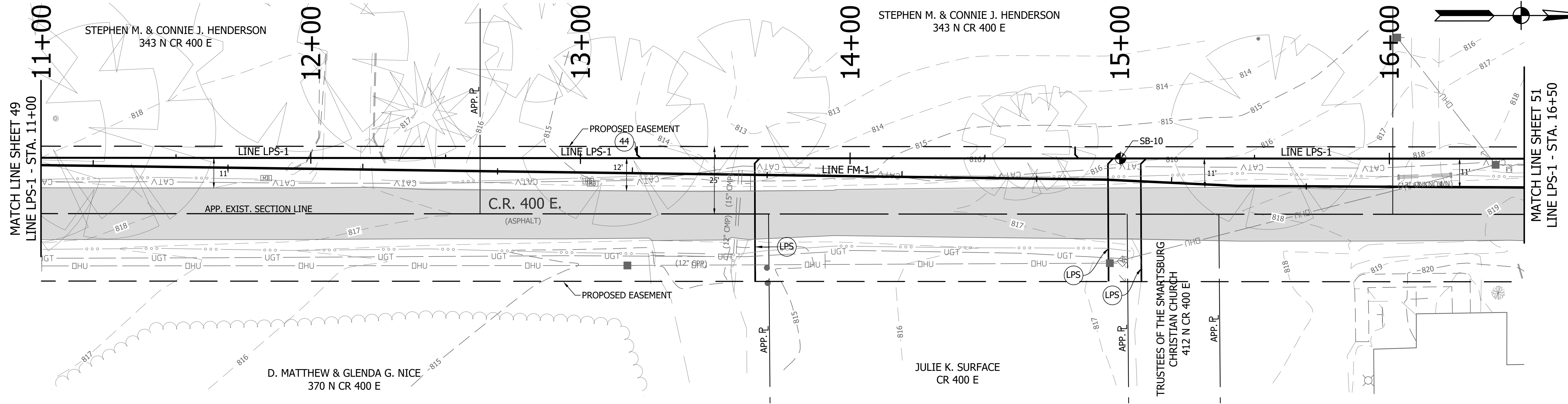


RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED: KDK	DRAWN: KDK	DATE
CHECKED: SJW	CHECKED: SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
FORCE MAIN - LINE LPS-1
 PLAN/PROFILE

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	49 of 126
PROJECT	15-3371

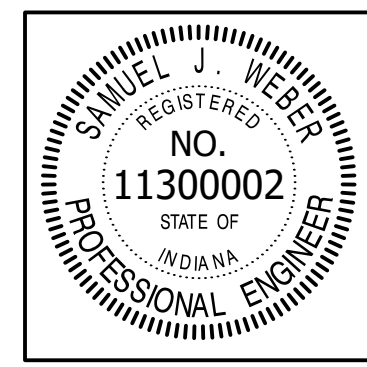
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 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:42pm



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REVISIONS			
NO.	DATE	DESCRIPTION	BY



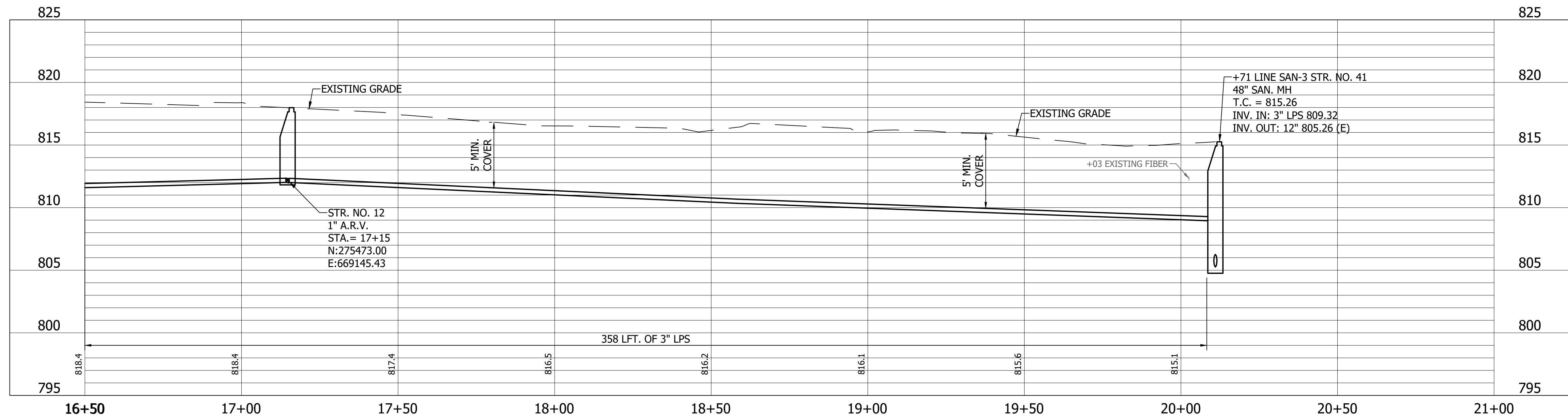
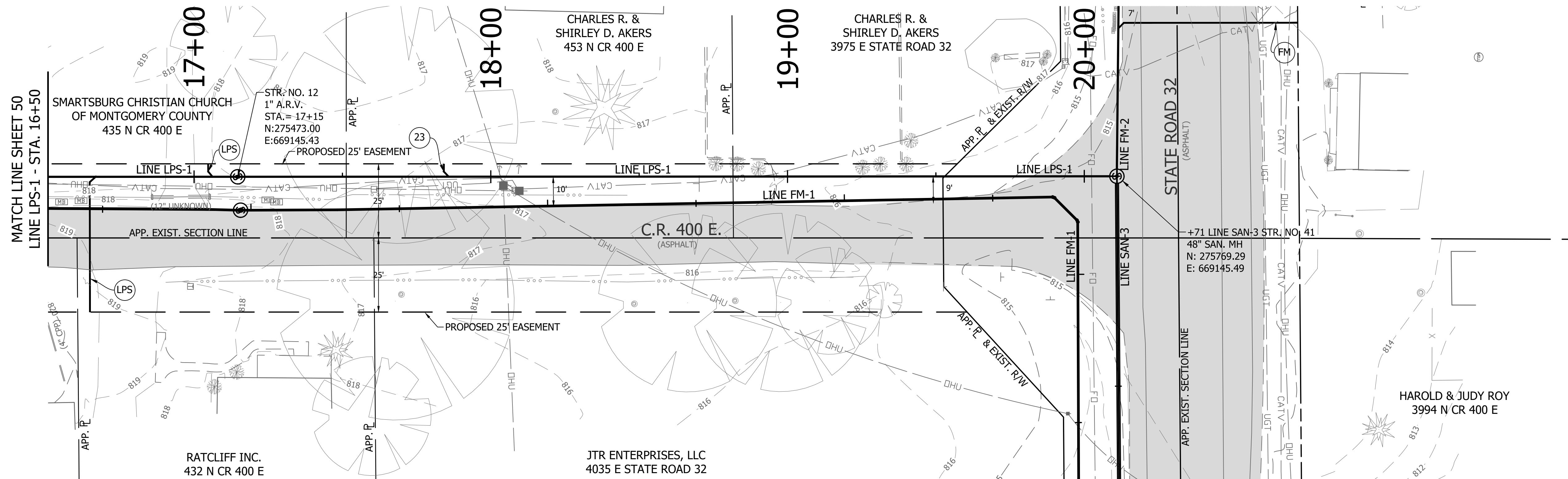
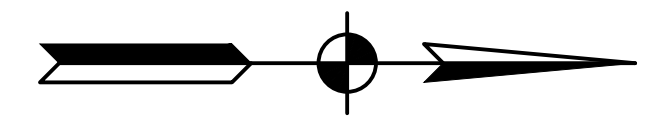
RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED:	KDK	DRAWN:
CHECKED:	SJW	CHECKED:

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

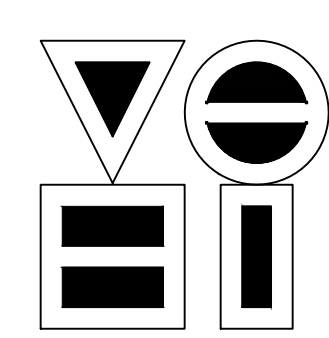
FORCE MAIN - LINE LPS-1

PLAN/PROFILE

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	50 of 126
PROJECT	15-3371

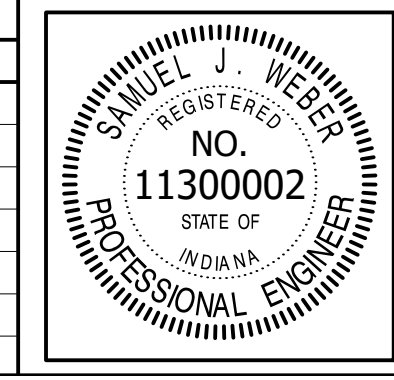


DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\03-Plan and Profiles
 FILE: ...PP LINE LPS-1.dwg
 DIMSCALE: 1/8" = 1' LTSCALE: ...20
 PLOTTED BY: JMooney
 DATE: Jun 06, 2018 - 6:42pm



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 vse@vsengineering.com www.vsengineering.com
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REVISIONS			
NO.	DATE	DESCRIPTION	BY

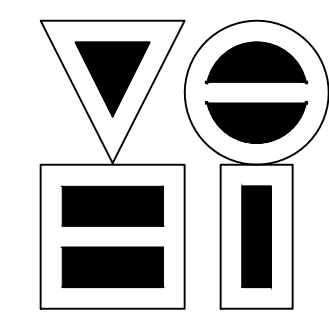
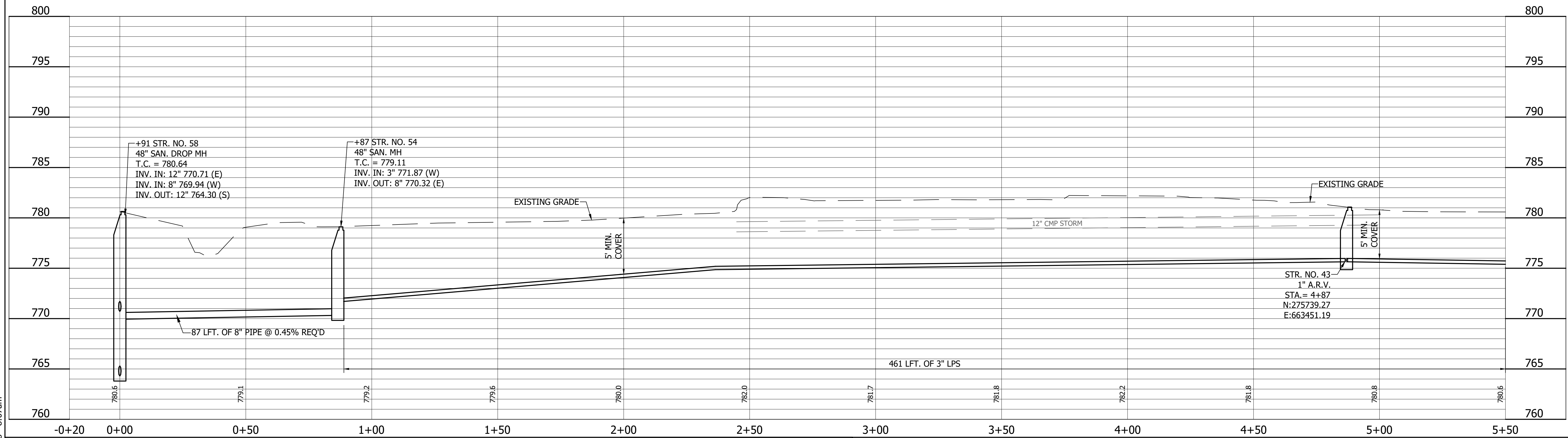
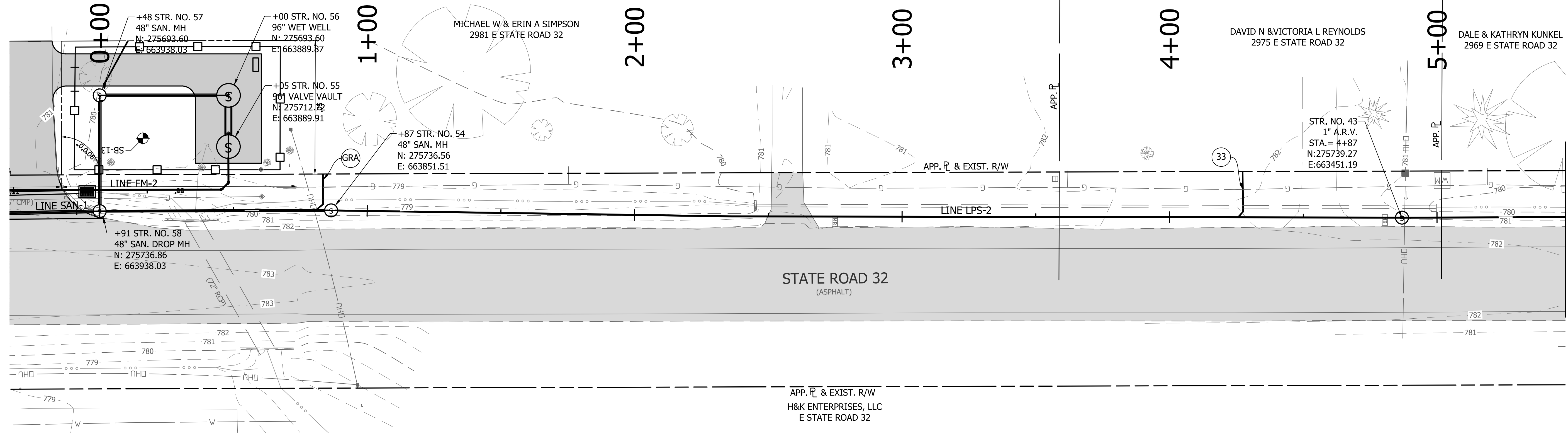


RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED: KDK	DRAWN: KDK	DATE
CHECKED: SJW	CHECKED: SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
FORCE MAIN - LINE LPS-1
 PLAN/PROFILE

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	51 of 126
PROJECT	15-3371

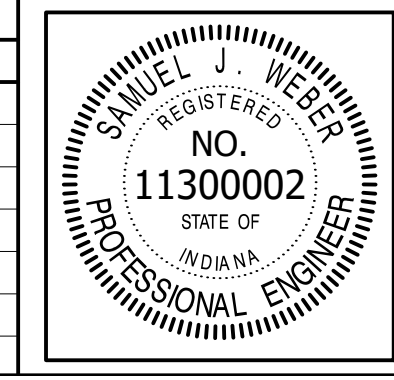
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 FILE: PP LINE LPS-2.dwg
 DIMSCALE: 1/4" = 1' LTSCALE: 20
 PLOTTED BY: SWeber
 DATE: Jun 07 2018 - 8:07am



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REVISIONS			
NO.	DATE	DESCRIPTION	BY

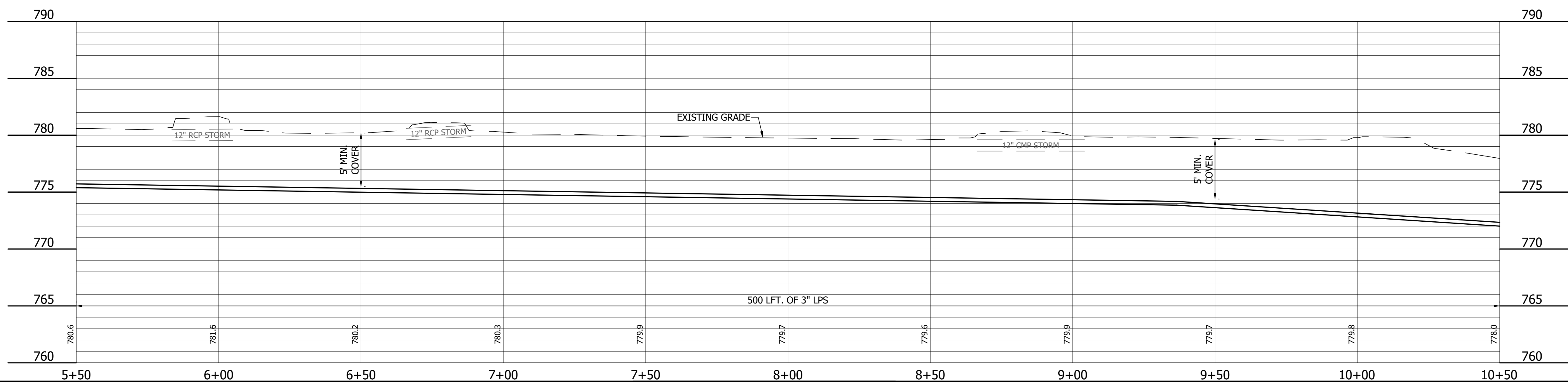
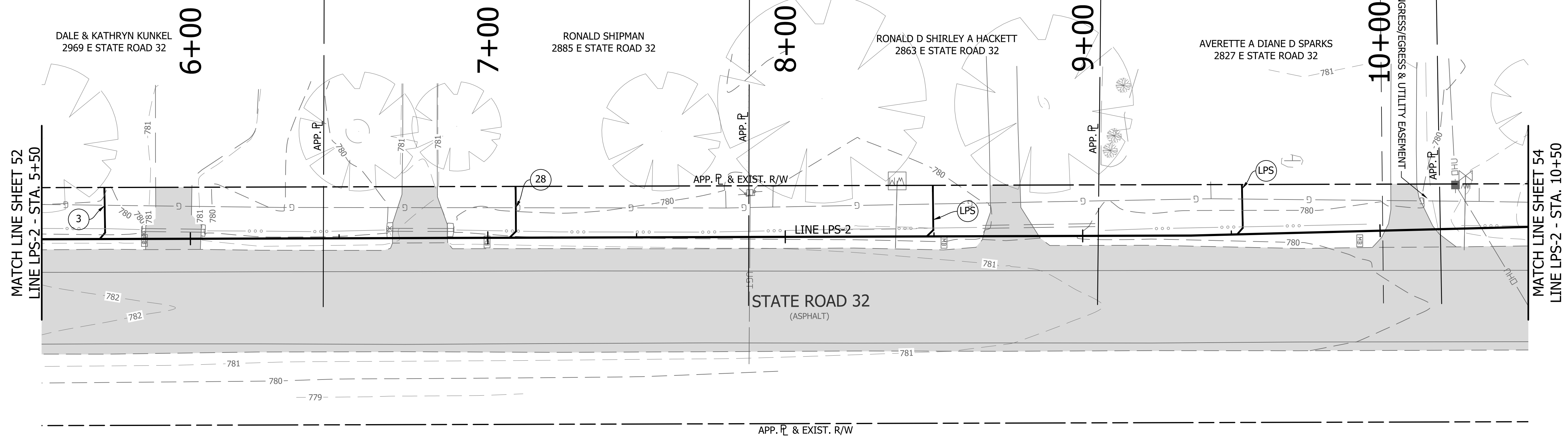


RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED: KDK	DRAWN: KDK	DATE
CHECKED: SJW	CHECKED: SJW	

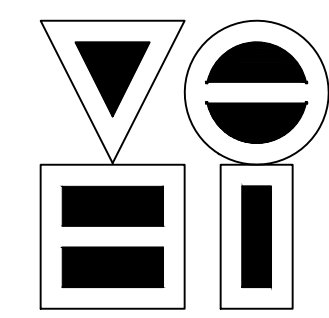
S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

FORCE MAIN - LINE LPS-2
PLAN/PROFILE

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	52 of 126
PROJECT	15-3371

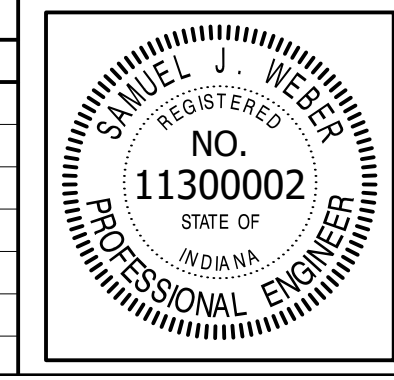


DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\03-Plan and Profiles\
 FILE: PP LINE LPS-2.dwg
 DIMSCALE: 1/4" = 1' LTSCALE: 20
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:43pm



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 4275 North High School Road Indianapolis, Indiana 46254
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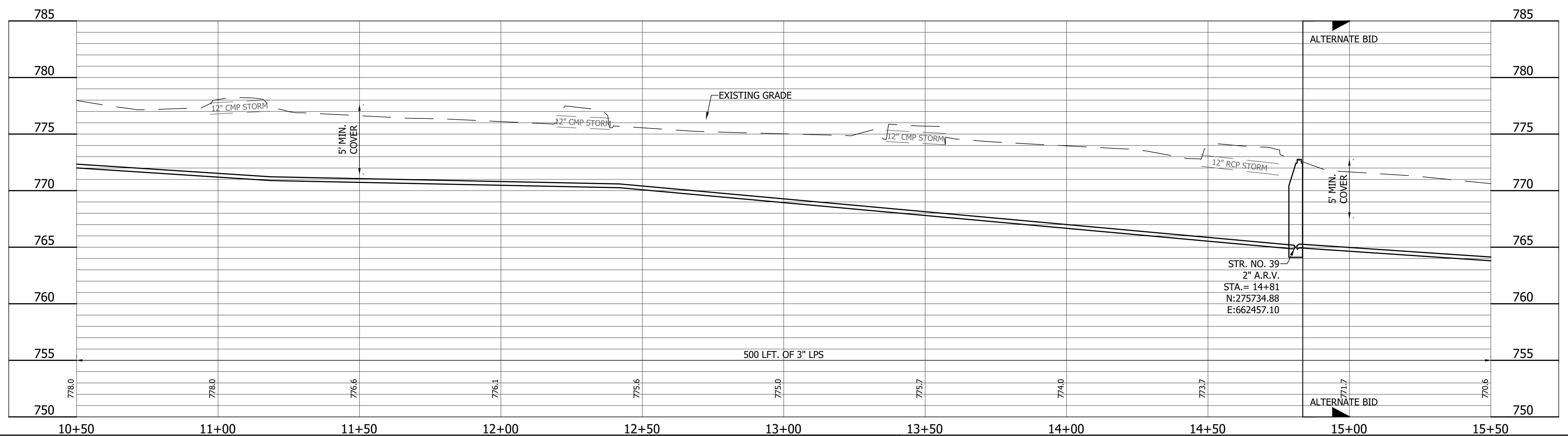
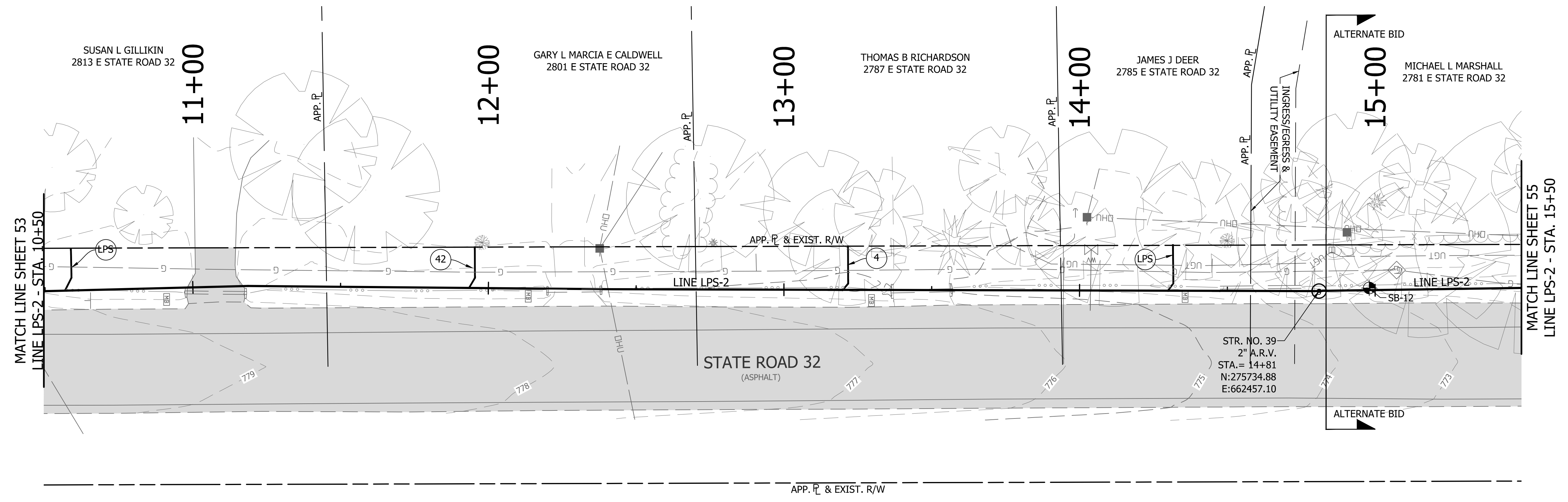
REVISIONS			
NO.	DATE	DESCRIPTION	BY



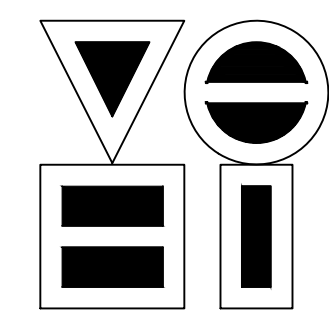
RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED:	KDK	DRAWN:
CHECKED:	SJW	CHECKED:

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
FORCE MAIN - LINE LPS-2
 PLAN/PROFILE

HORIZONTAL SCALE	
1" = 20'	
VERTICAL SCALE	
1" = 5'	
SHEETS	
53	of 126
PROJECT	
15-3371	

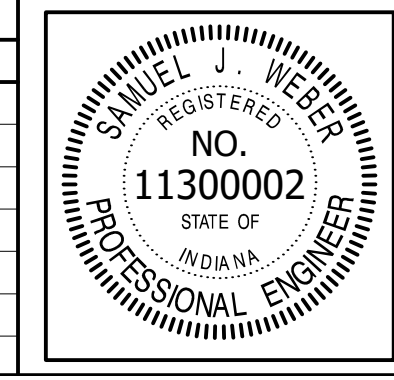


DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\03-Plan and Profiles
 FILE: 15-3371 PP LINE LPS-2.dwg
 DIMSCALE: 1/8\"/>



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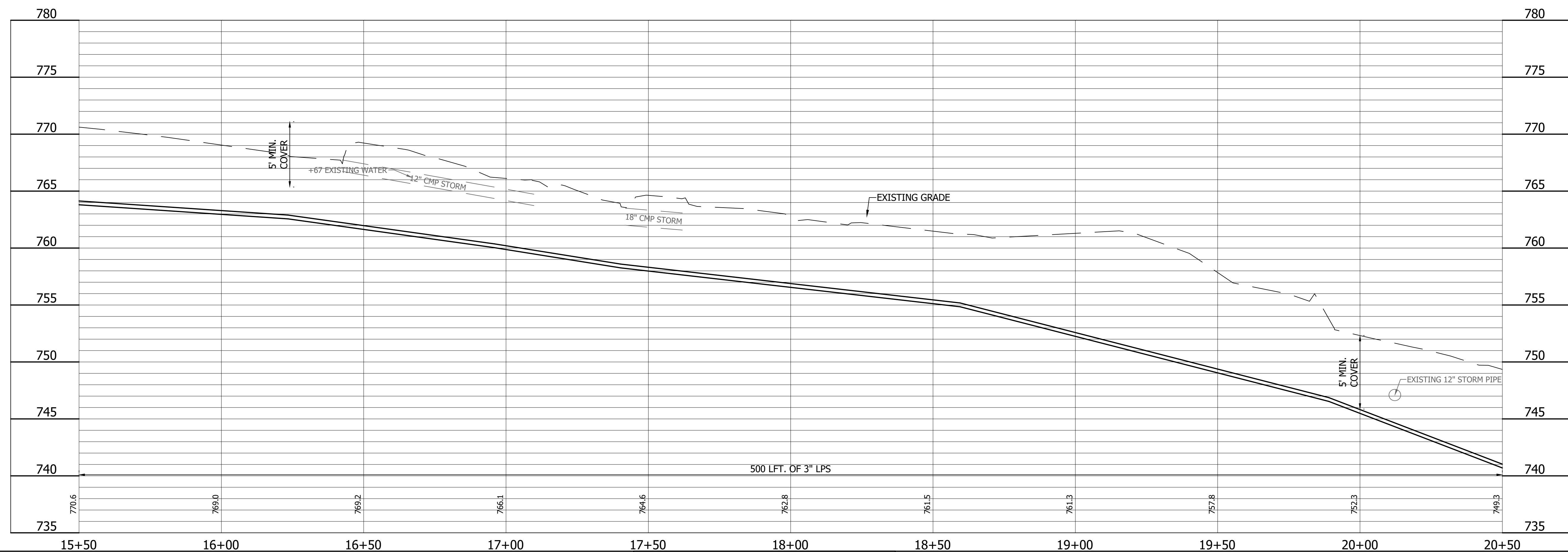
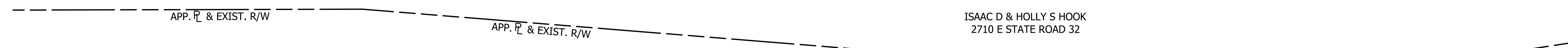
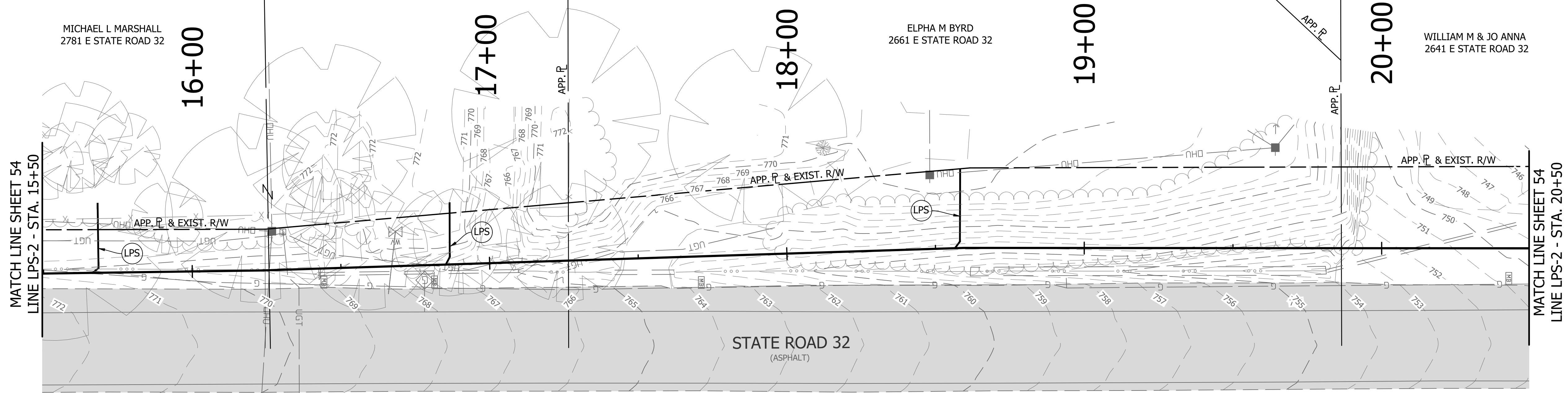
REVISIONS			
NO.	DATE	DESCRIPTION	BY



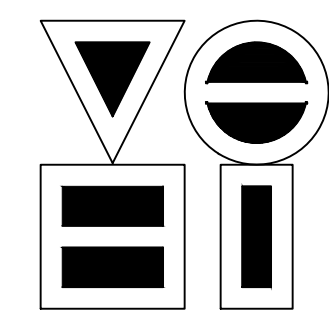
RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED:	KDK	DATE
DRAWN:	KDK	
CHECKED:	SJW	
	CHECKED:	SJW

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
FORCE MAIN - LINE LPS-2
 PLAN/PROFILE

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	54 of 126
PROJECT	15-3371

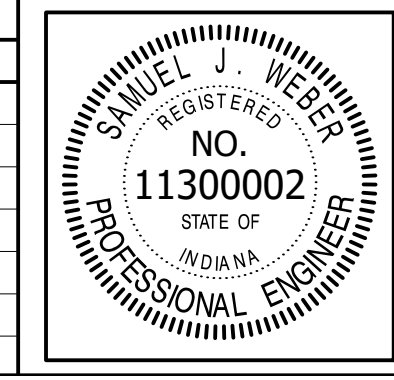


DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\03-Plan and Profiles\
 FILE:PP LINE LPS-2.dwg
 DIMSCALE: 1/4" = 1' LTSCALE: 20
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:44pm



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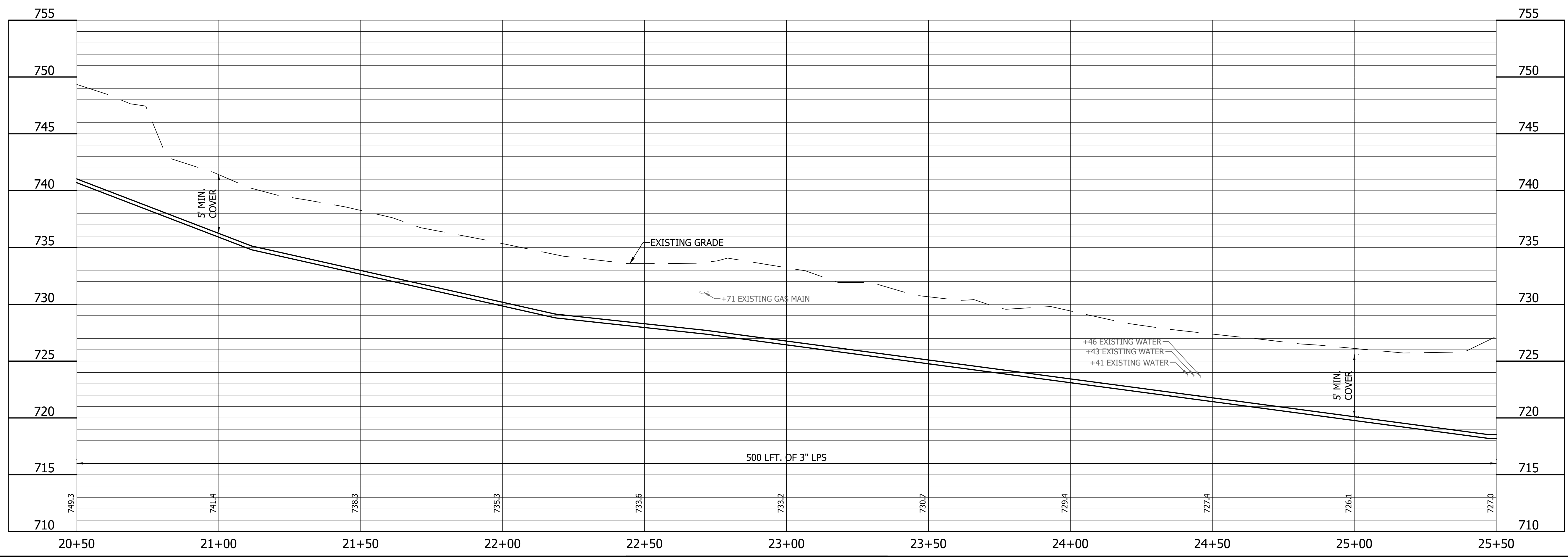
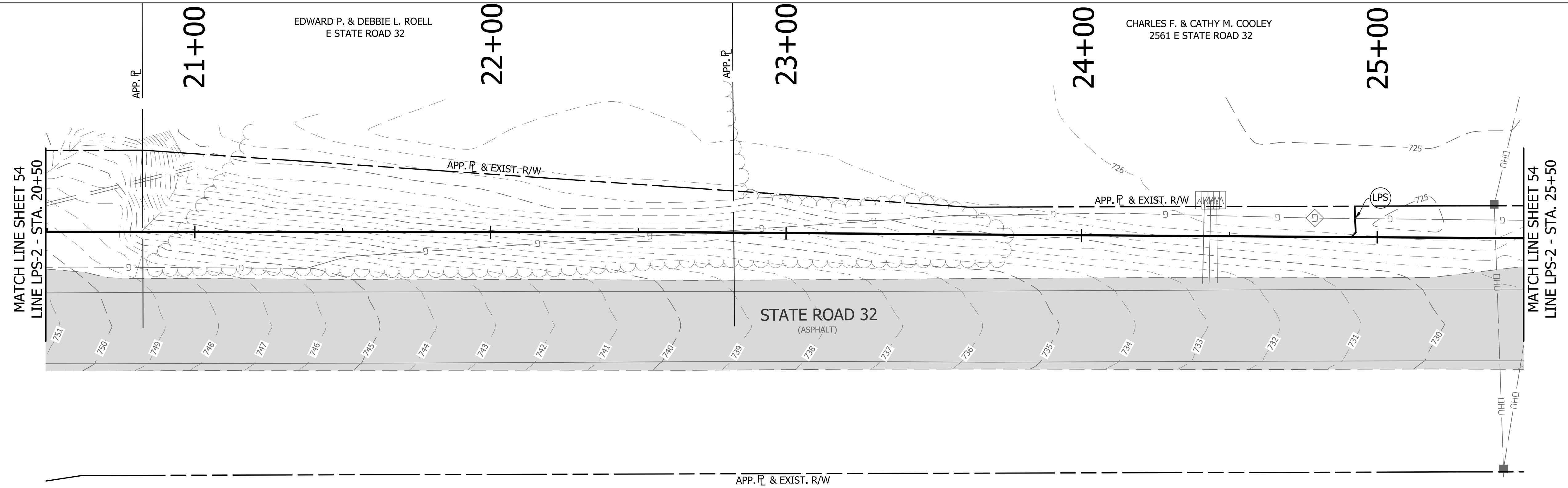
REVISIONS			
NO.	DATE	DESCRIPTION	BY



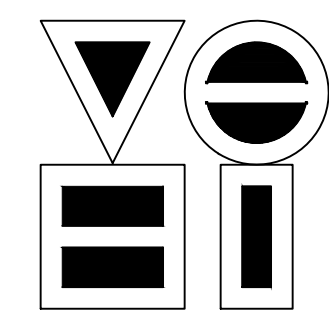
RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED:	KDK	DATE
DRAWN:	KDK	
CHECKED:	SJW	
CHECKED:	SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER
 COLLECTION SYSTEM
FORCE MAIN - LINE LPS-2
 PLAN/PROFILE

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	55 of 126
PROJECT	15-3371

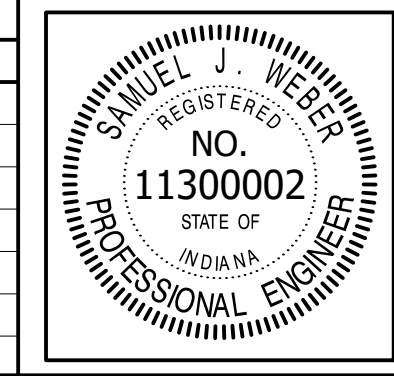


DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\03-Plan and Profiles
 FILE: ...PP LINE LPS-2.dwg
 DIMSCALE: 1/4" = 1' LTSCALE: 20
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:44pm



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 vse@vsengineering.com www.vsengineering.com
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REVISIONS			
NO.	DATE	DESCRIPTION	BY

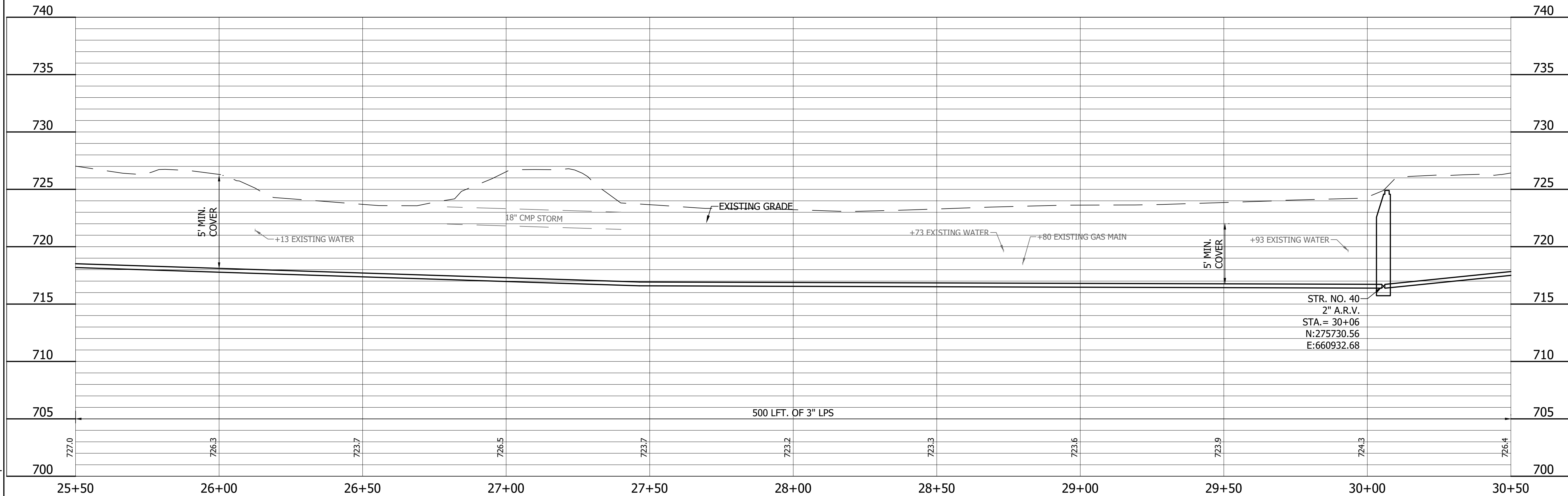
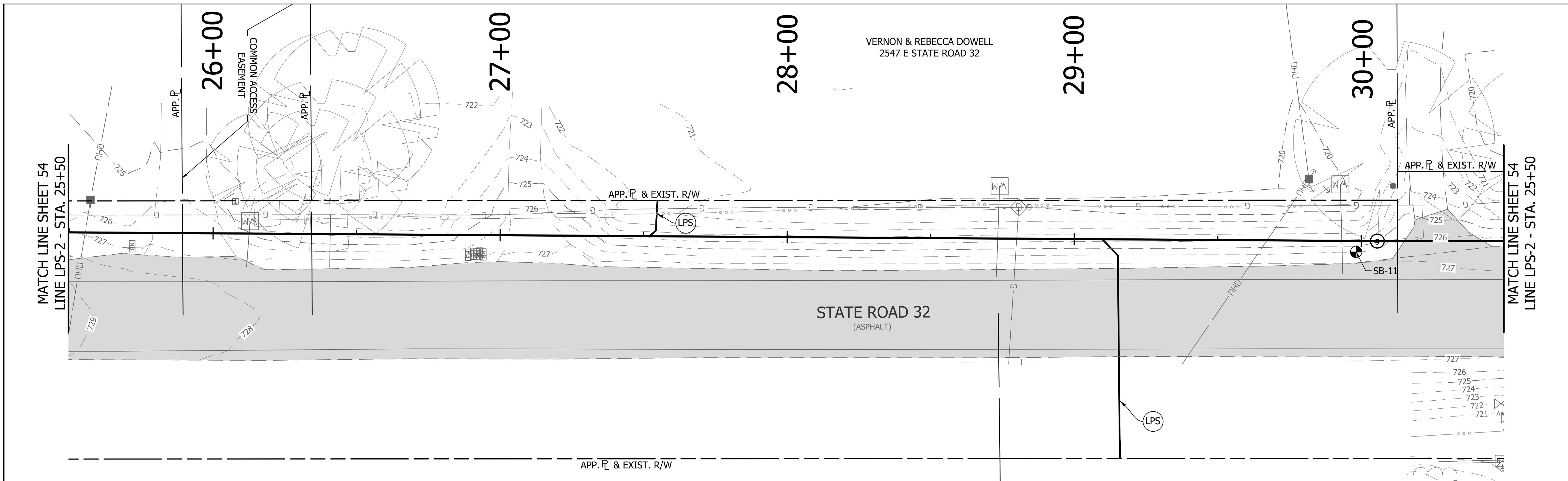


RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED:	KDK	DATE
DRAWN:	KDK	
CHECKED:	SJW	
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S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
FORCE MAIN - LINE LPS-2
PLAN/PROFILE

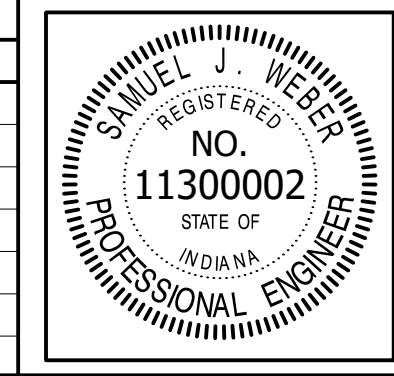
HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	56 of 126
PROJECT	15-3371

DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\03-Plan and Profiles
 FILE:PP LINE LPS-2.dwg
 DIMSCALE: 1/4" = 1' LTSCALE: 20
 PLOTTED BY: J.Mowery
 DATE: Jun 06, 2018 - 6:44pm



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REVISIONS			
NO.	DATE	DESCRIPTION	BY



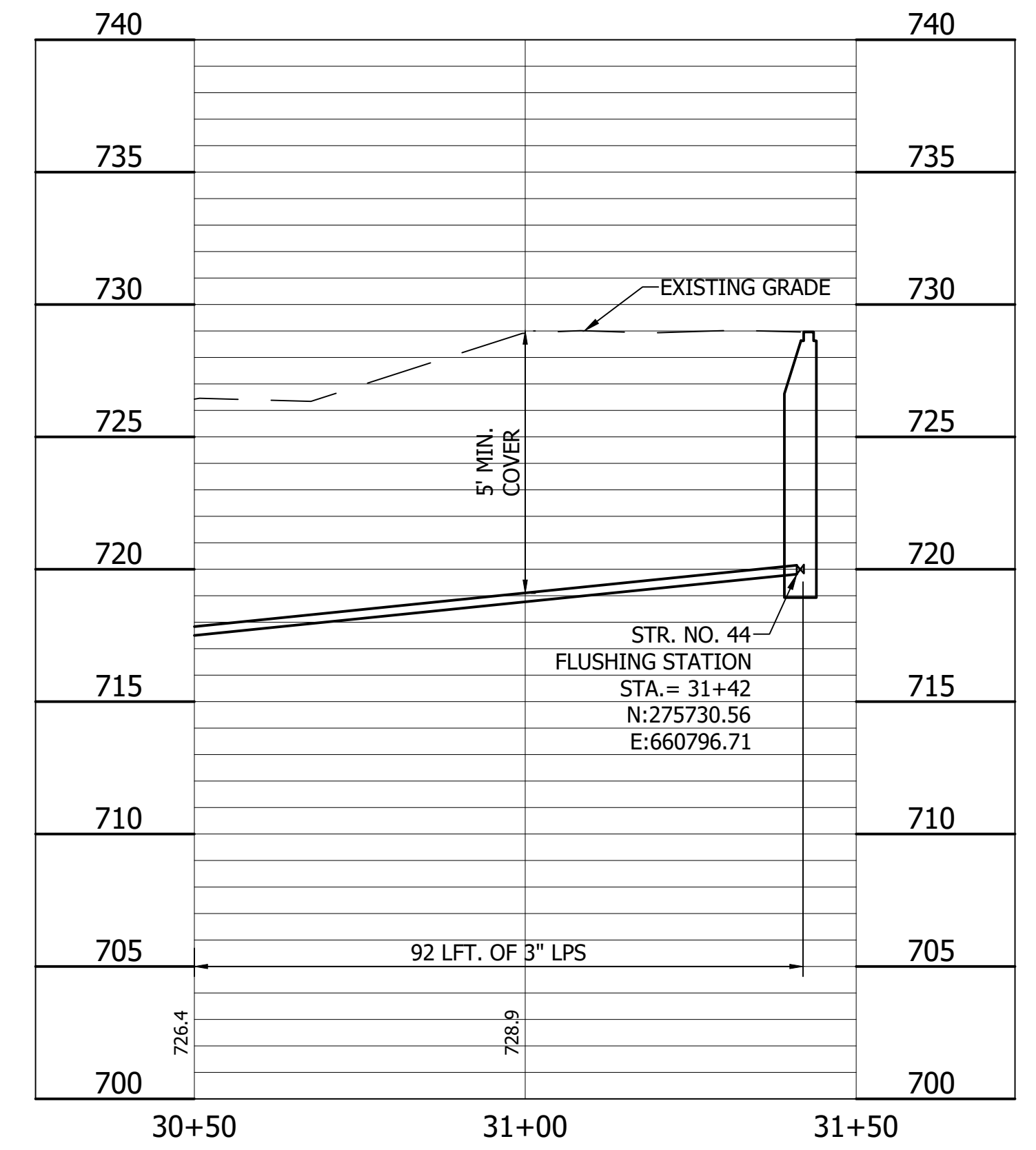
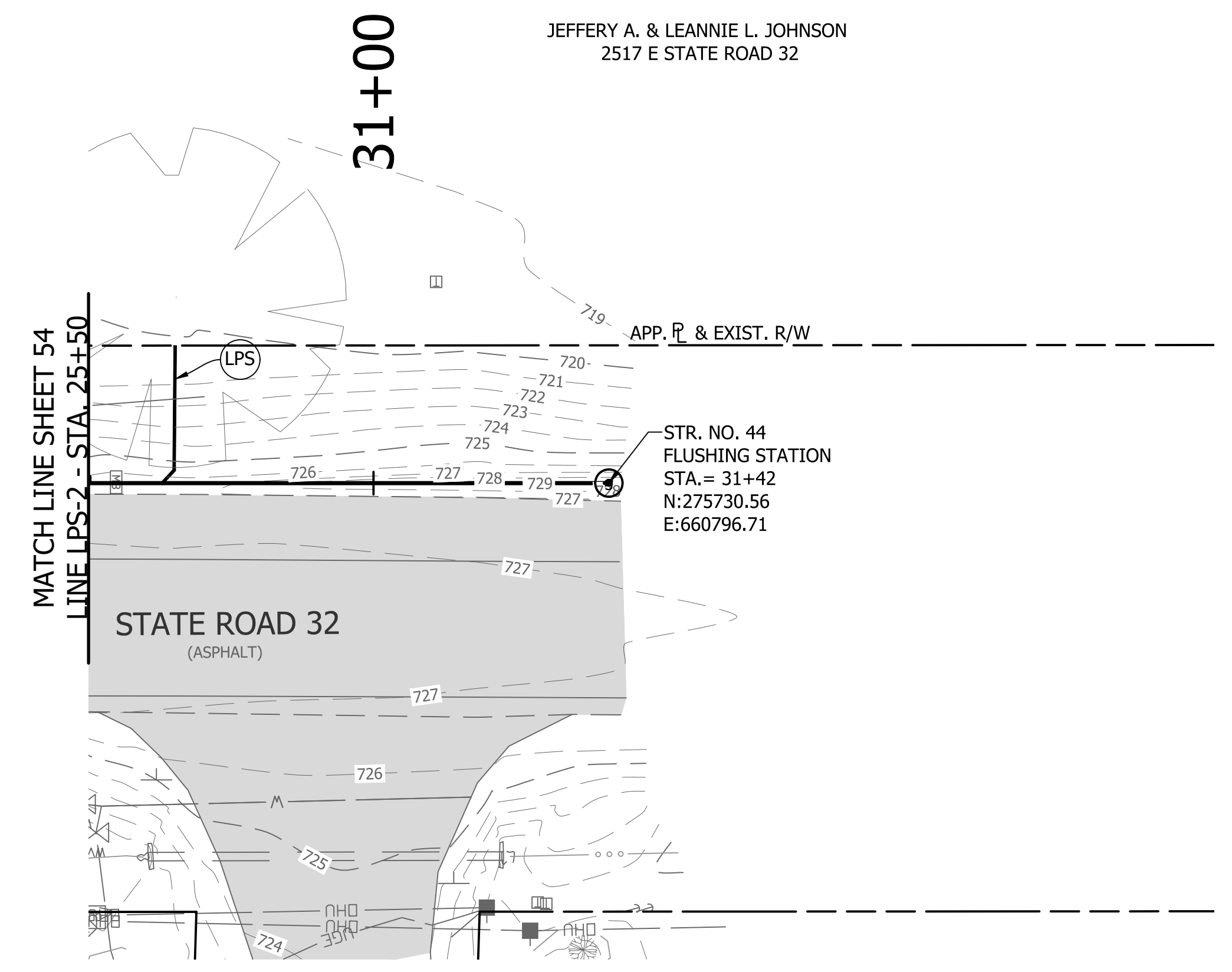
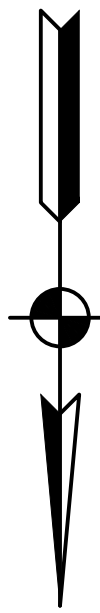
RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED:	KDK	DATE
DRAWN:	KDK	
CHECKED:	SJW	
CHECKED:	SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

FORCE MAIN - LINE LPS-2

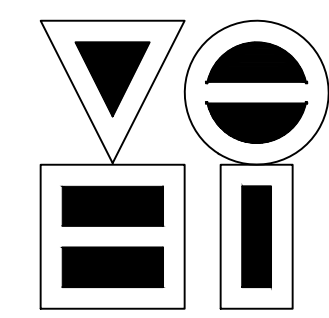
PLAN/PROFILE

HORIZONTAL SCALE	
1" = 20'	
VERTICAL SCALE	
1" = 5'	
SHEETS	
57	of 126
PROJECT	
15-3371	



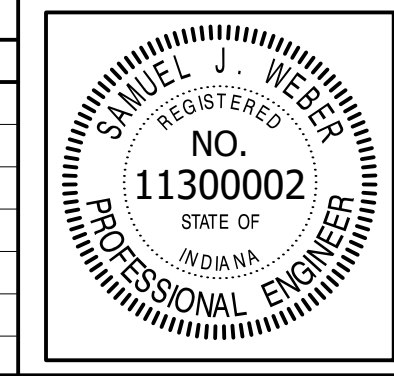
JEFFERY A. & LEANNIE L. JOHNSON
2517 E STATE ROAD 32

DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\03-Plan and Profiles\
 FILE: PP LINE LPS-2.dwg
 DIMSCALE: 1/8"=1'-0"
 PLOTTED BY: J.Mowery
 DATE: Jun 06, 2018 - 6:45pm



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REVISIONS			
NO.	DATE	DESCRIPTION	BY

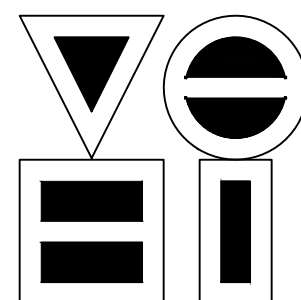
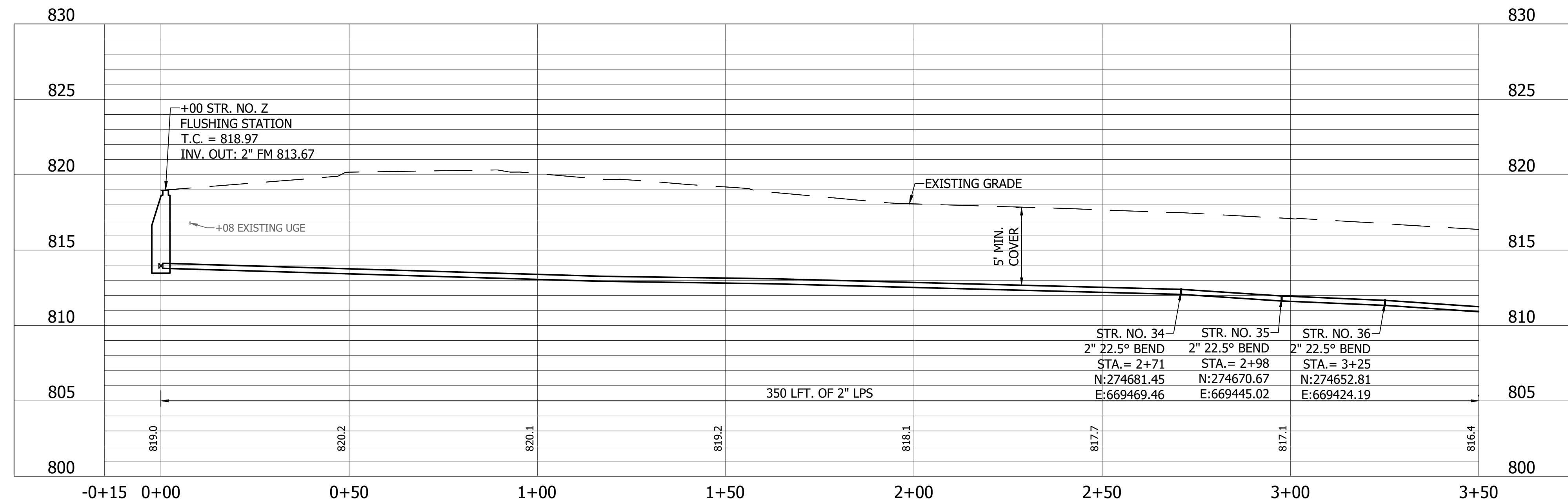
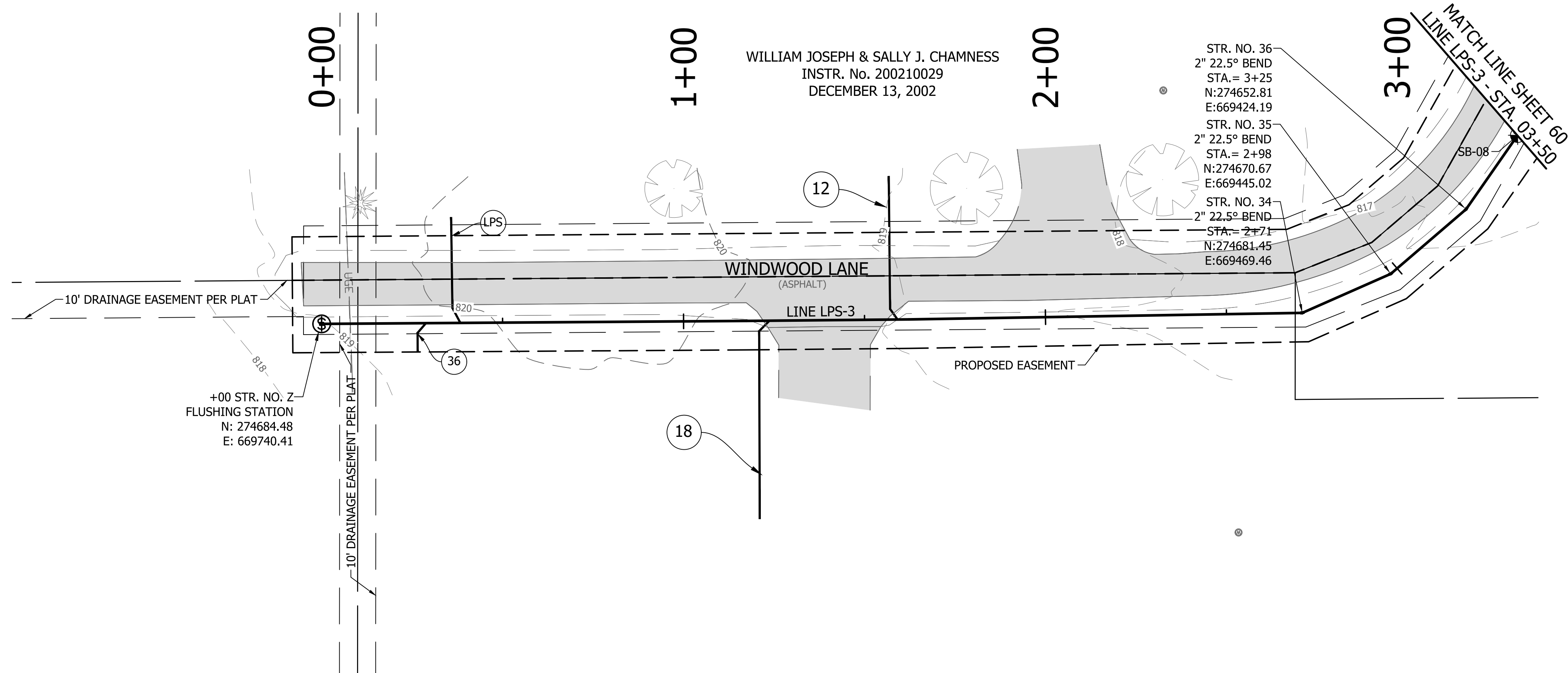


RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED:	KDK	DRAWN:
CHECKED:	SJW	CHECKED:
		DATE

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
FORCE MAIN - LINE LPS-2
 PLAN/PROFILE

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	58 of 126
PROJECT	15-3371

DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\03-Plan and Profiles\
 FILE: PP LINE LPS-3.dwg
 DIMSCALE: 1/8" = 1' LTSCALE: 20
 PLOTTED BY: J.Mowery
 DATE: Jun 06, 2018 - 6:45pm

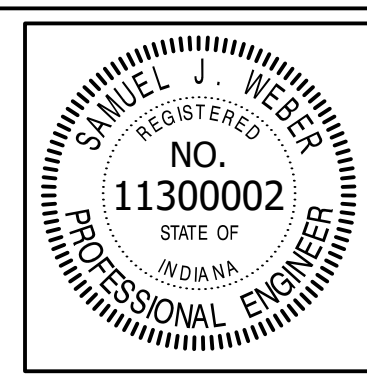


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REVISIONS			
NO.	DATE	DESCRIPTION	BY

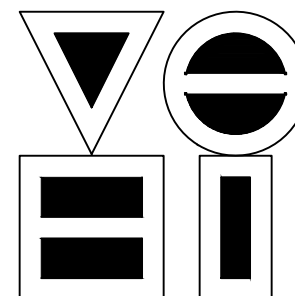
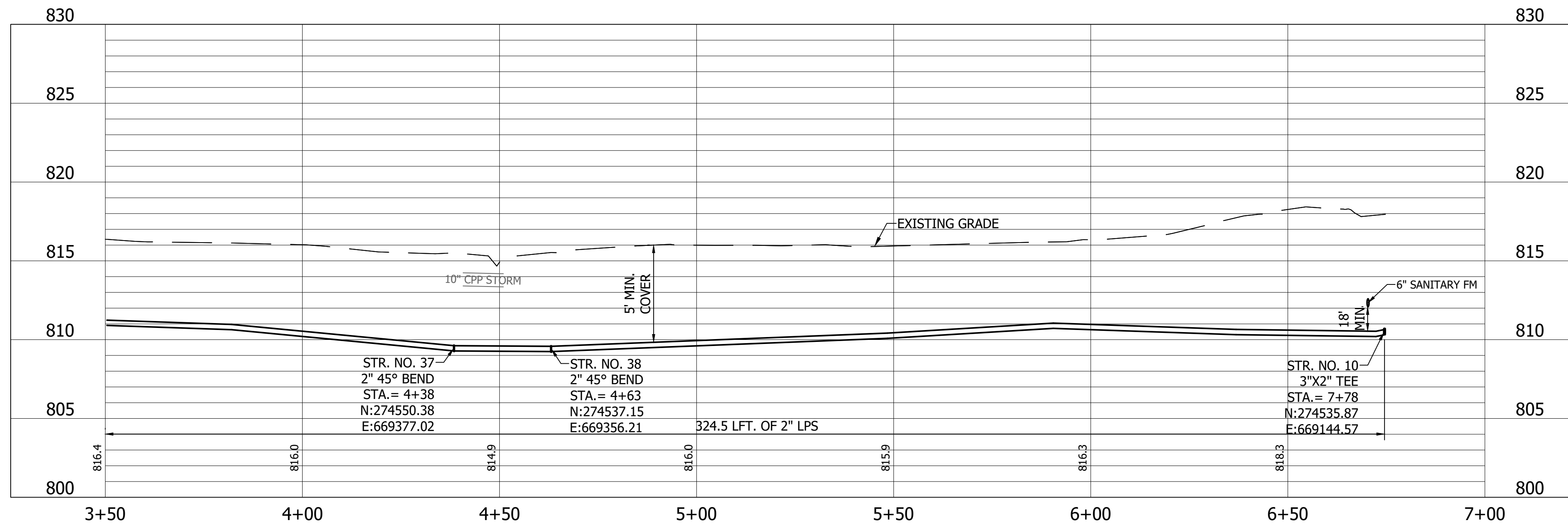
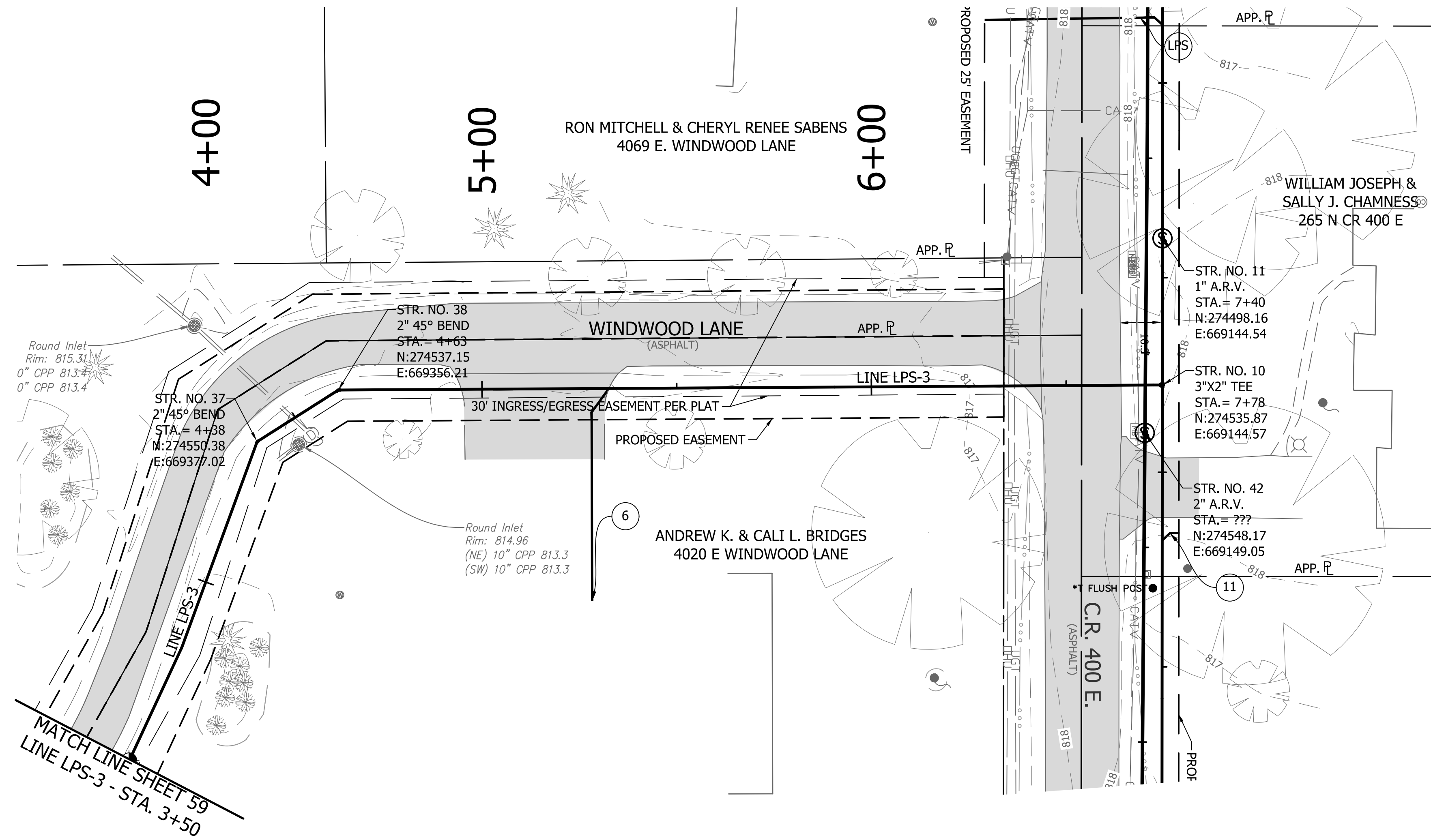


RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED:	KDK	DATE
DRAWN:	KDK	
CHECKED:	SJW	
CHECKED:	SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM	
LOW PRESSURE - LINE LPS-3 PLAN/PROFILE	

HORIZONTAL SCALE	
1" = 20'	
VERTICAL SCALE	
1" = 5'	
SHEETS	
59	of 126
PROJECT	
15-3371	

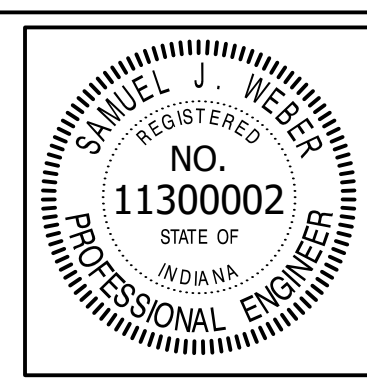
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 FILE:PP LINE LPS-3.dwg
 DIMSCALE: 1" = 5'
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:46pm



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 vse@vsengineering.com www.vsengineering.com
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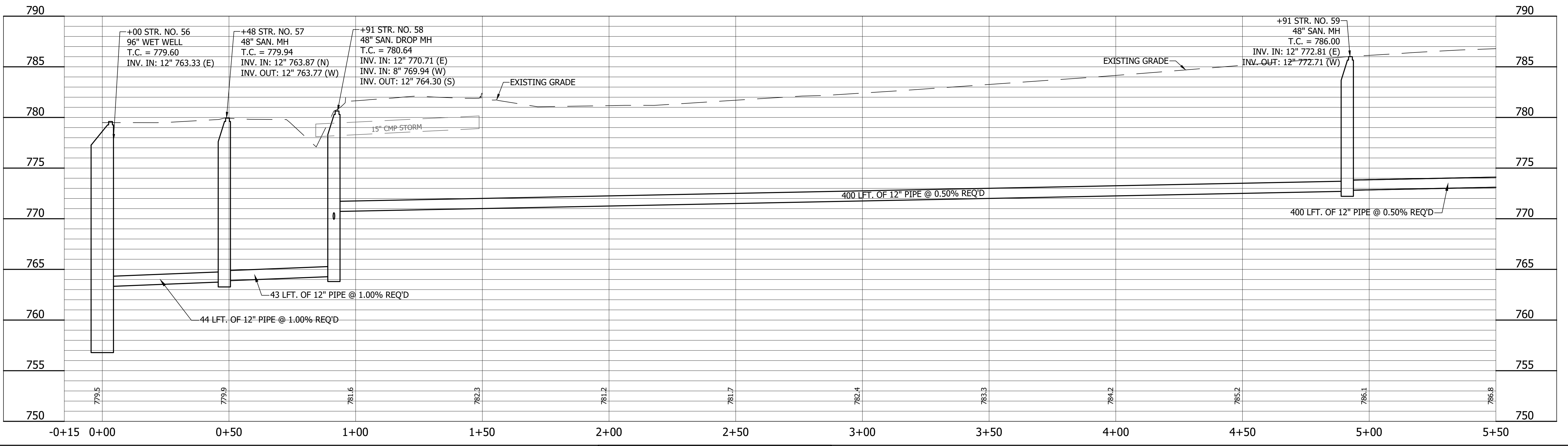
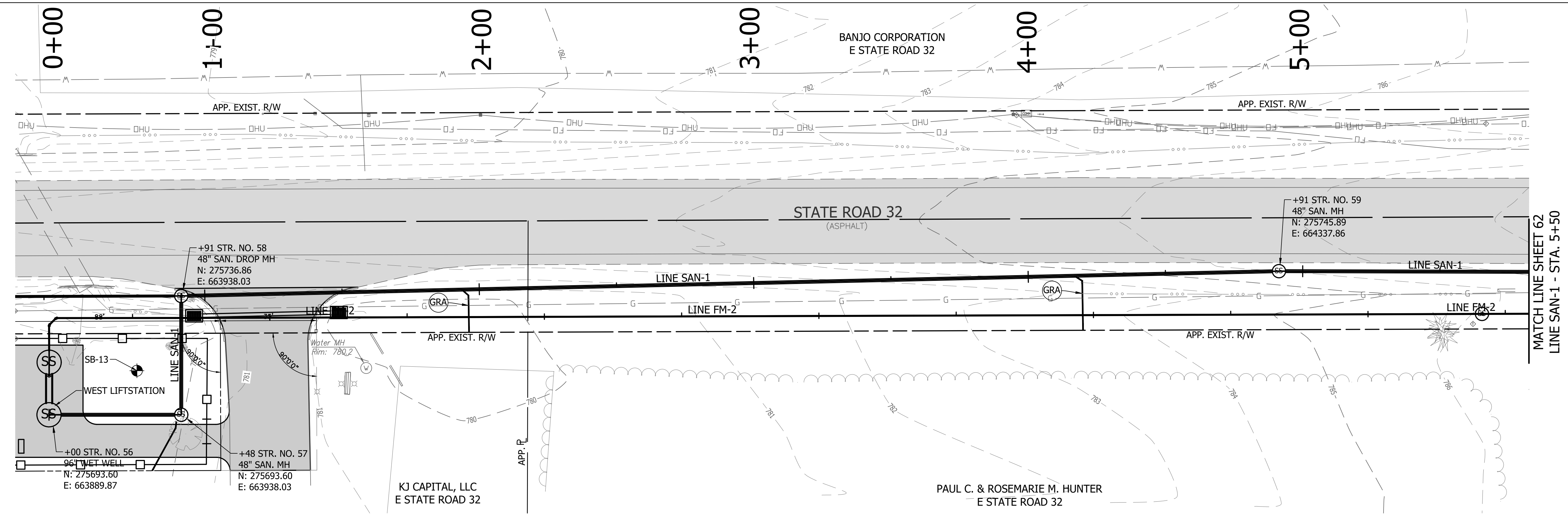
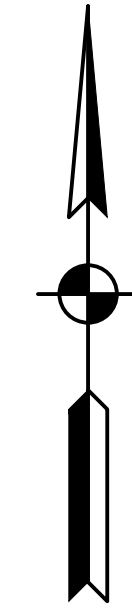
REVISIONS			
NO.	DATE	DESCRIPTION	BY



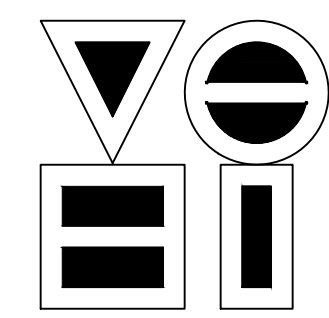
RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED:	KDK	DATE
DRAWN:	KDK	
CHECKED:	SJW	
CHECKED:	SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM	
LOW PRESSURE - LINE LPS-3 PLAN/PROFILE	

HORIZONTAL SCALE	
1" = 20'	
VERTICAL SCALE	
1" = 5'	
SHEETS	
60	of 126
PROJECT	
15-3371	

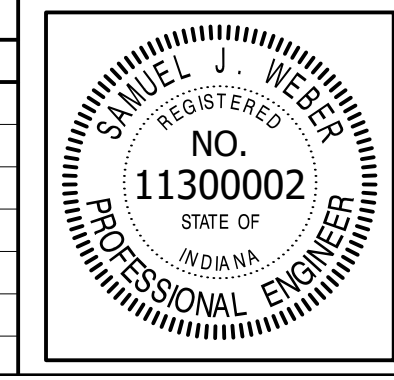


DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\03-Plan and Profiles
 FILE: PP LINE SAN-1.dwg
 DIMSCALE: 1/4\"/>



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 4275 North High School Road Indianapolis, Indiana 46254
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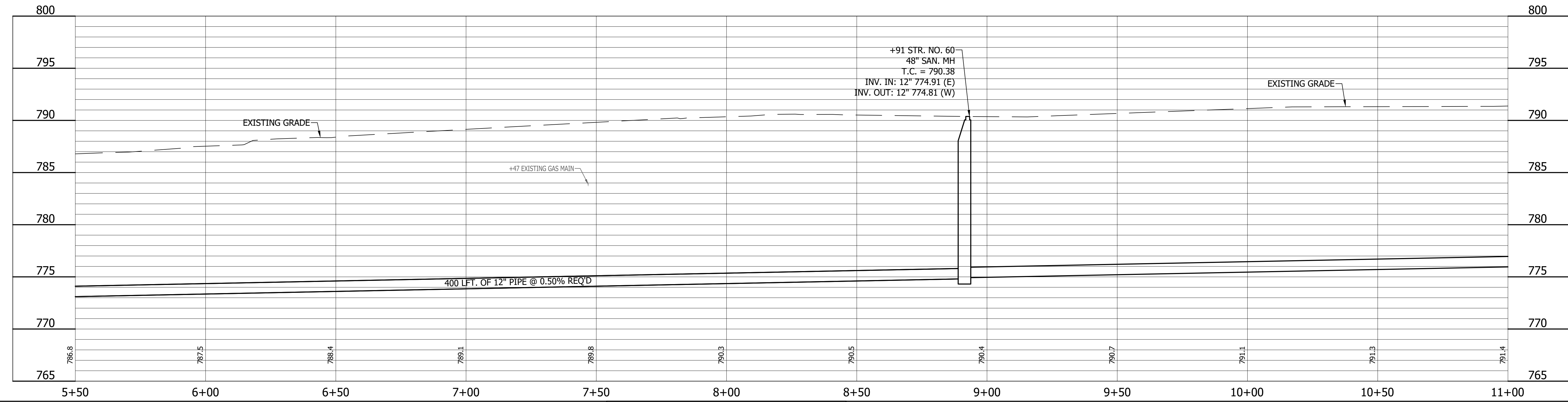
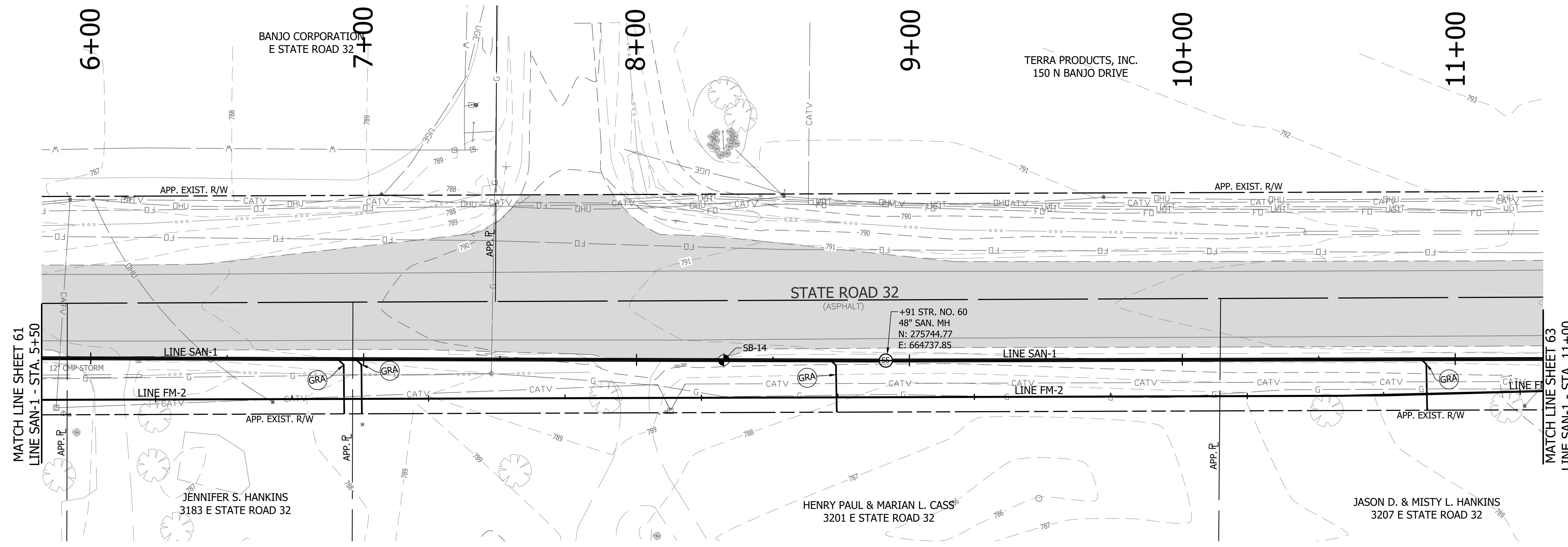
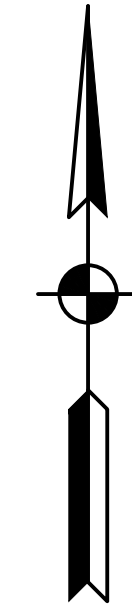
REVISIONS			
NO.	DATE	DESCRIPTION	BY



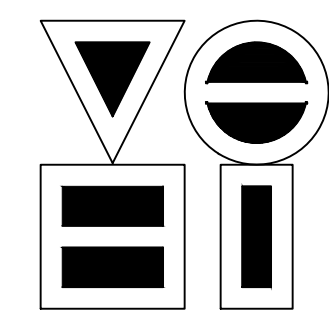
RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED: KDK	DRAWN: KDK	DATE
CHECKED: SJW	CHECKED: SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
GRAVITY SEWER - LINE SAN-1
 PLAN/PROFILE

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	61 of 126
PROJECT	15-3371

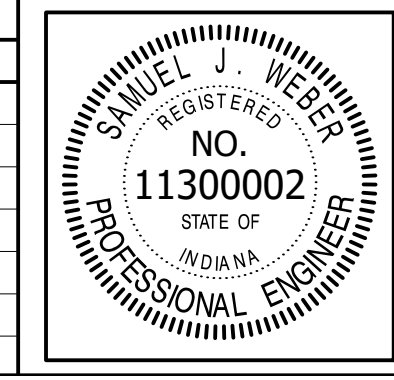


DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\Drawings\03-Plan and Profiles
 FILE: PP LINE SAN-1.dwg
 DIMSCALE: 1/8" = 1' LTSCALE: 20
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:46pm



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 4275 North High School Road Indianapolis, Indiana 46254
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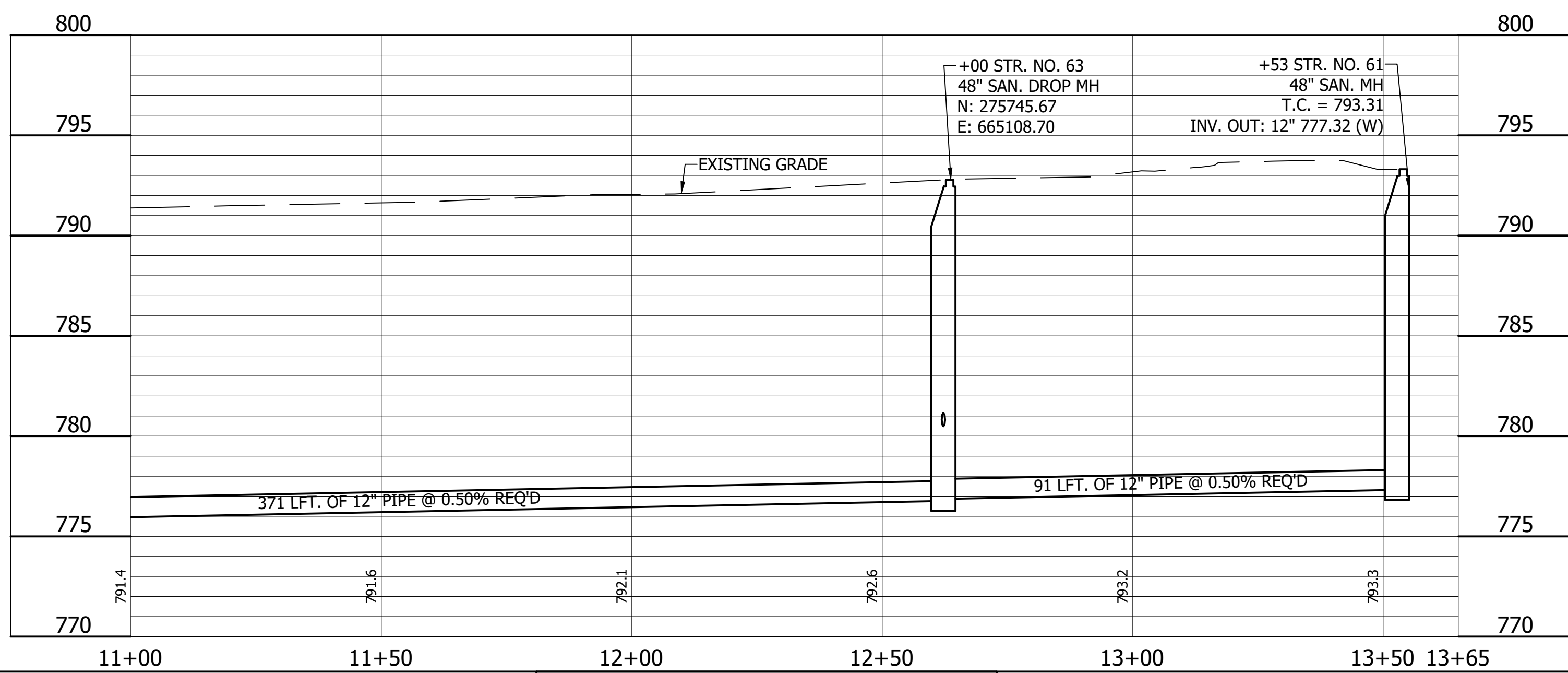
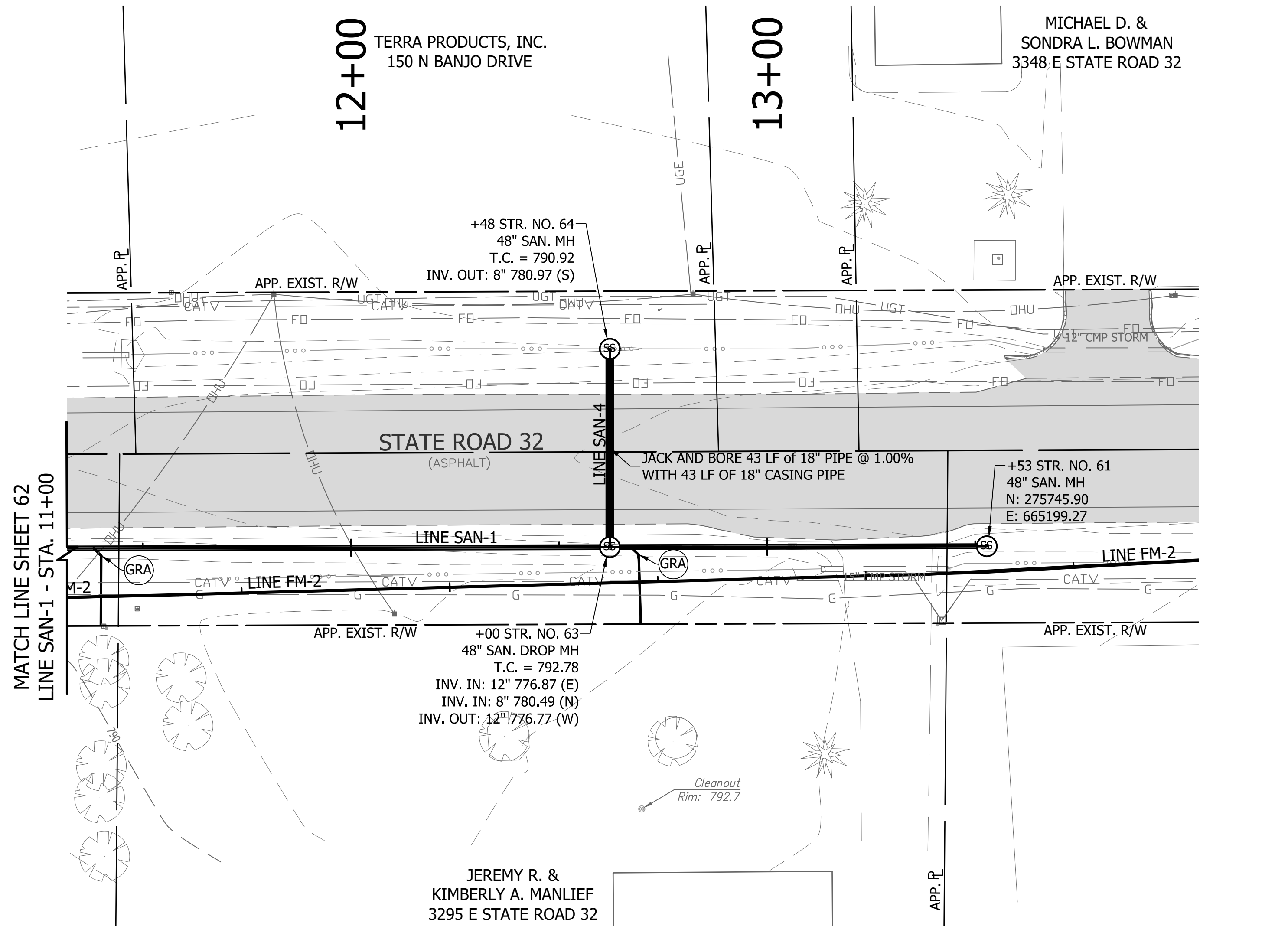
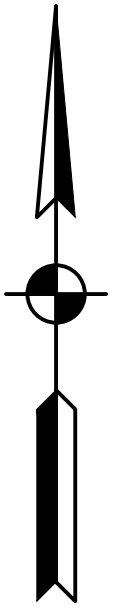
REVISIONS			
NO.	DATE	DESCRIPTION	BY



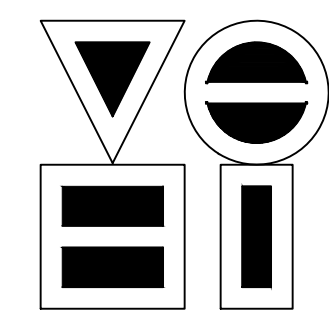
RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED: KDK	DRAWN: KDK	DATE
CHECKED: SJW	CHECKED: SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
GRAVITY SEWER - LINE SAN-1
 PLAN/PROFILE

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	62 of 126
PROJECT	15-3371

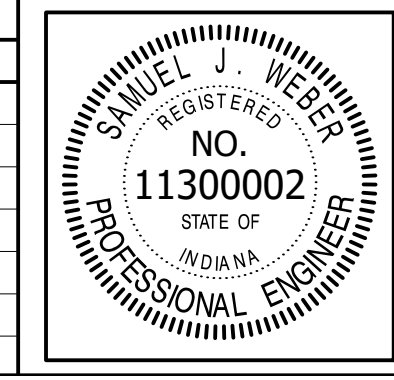


DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\03-Plan and Profiles\
 FILE:PP LINE SAN-1.dwg
 DIMSCALE: 1" = 20'
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:47pm



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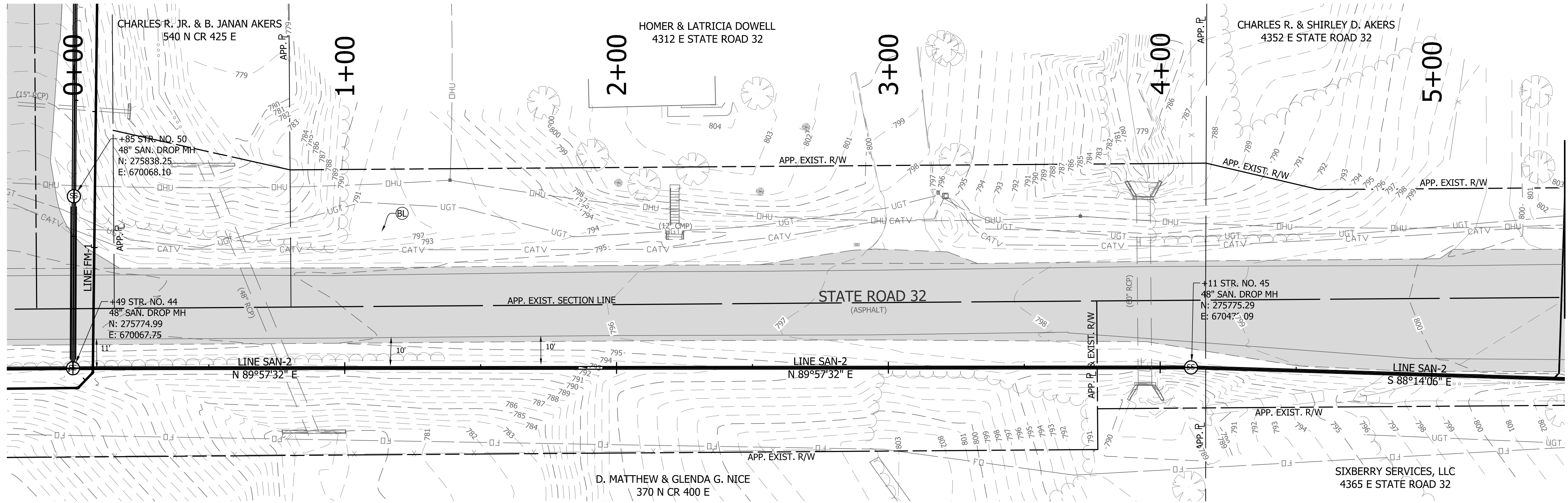
REVISIONS			
NO.	DATE	DESCRIPTION	BY



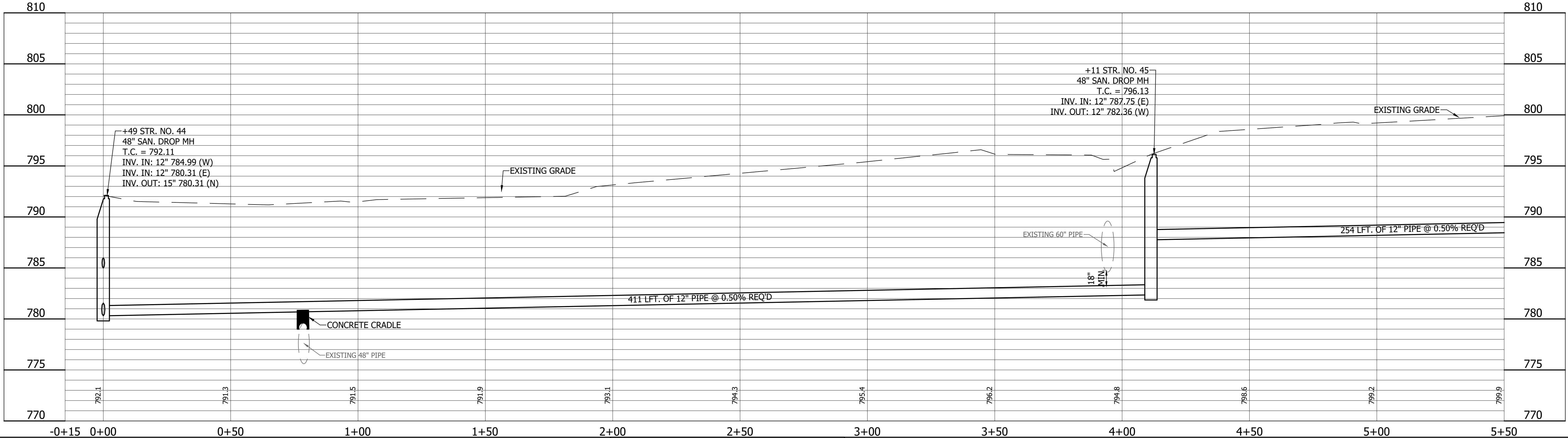
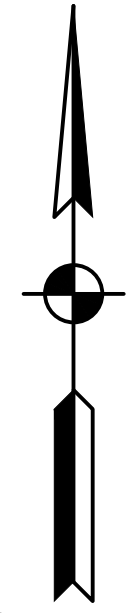
RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED: KDK	DRAWN: KDK	DATE
CHECKED: SJW	CHECKED: SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
 GRAVITY SEWER - LINE SAN-1
 PLAN/PROFILE

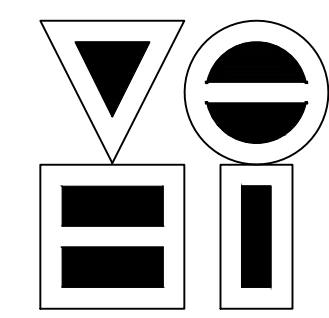
HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	63 of 126
PROJECT	15-3371



MATCH LINE SHEET 65
LINE SAN-2 - STA. 5+50

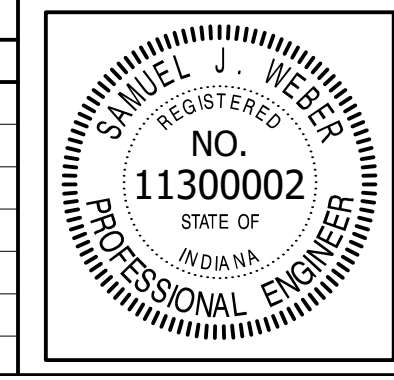


DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\Drawings\03-Plan and Profiles
 FILE: PP LINE SAN-2.dwg
 DIMSCALE: 1/8" = 1'-0"
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:06pm



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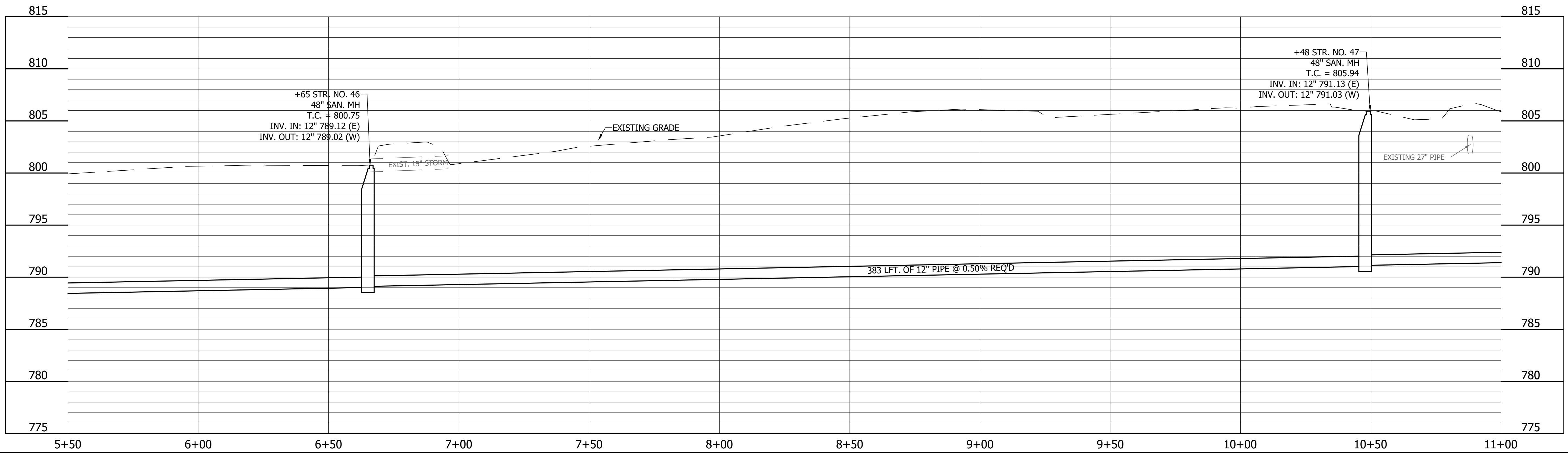
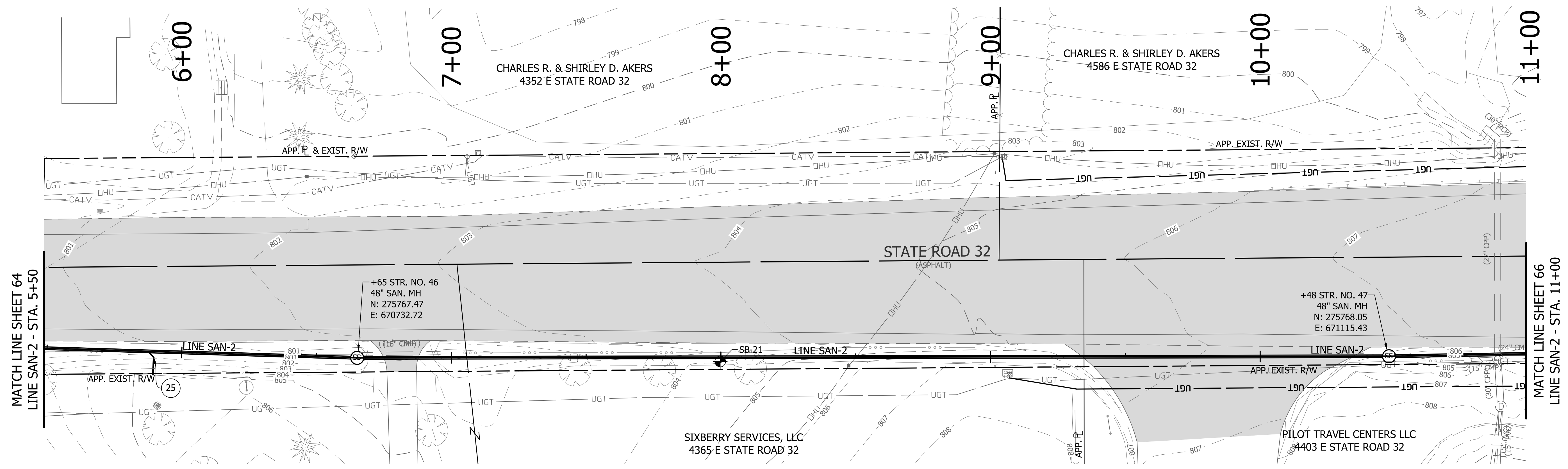
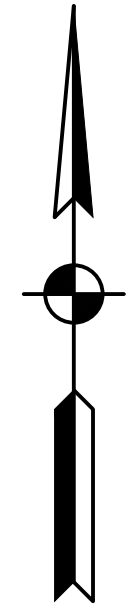
REVISIONS			
NO.	DATE	DESCRIPTION	BY



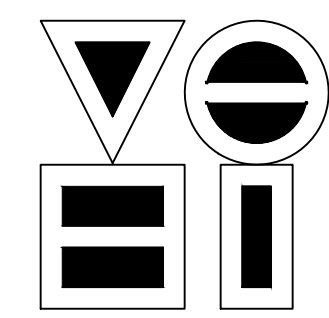
RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED:	KDK	DATE
DRAWN:	KDK	
CHECKED:	SJW	
	CHECKED:	SJW

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
GRAVITY SEWER - LINE SAN-2
 PLAN/PROFILE

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	64 of 126
PROJECT	15-3371

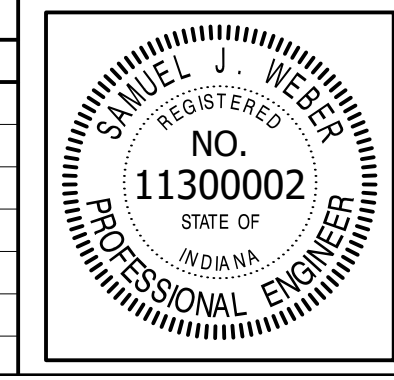


DIRECTORY: F:\2015\15-3371_SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\03-Plan and Profiles
 FILE: PP LINE SAN-2.dwg
 DIMSCALE: 1/4\"/>



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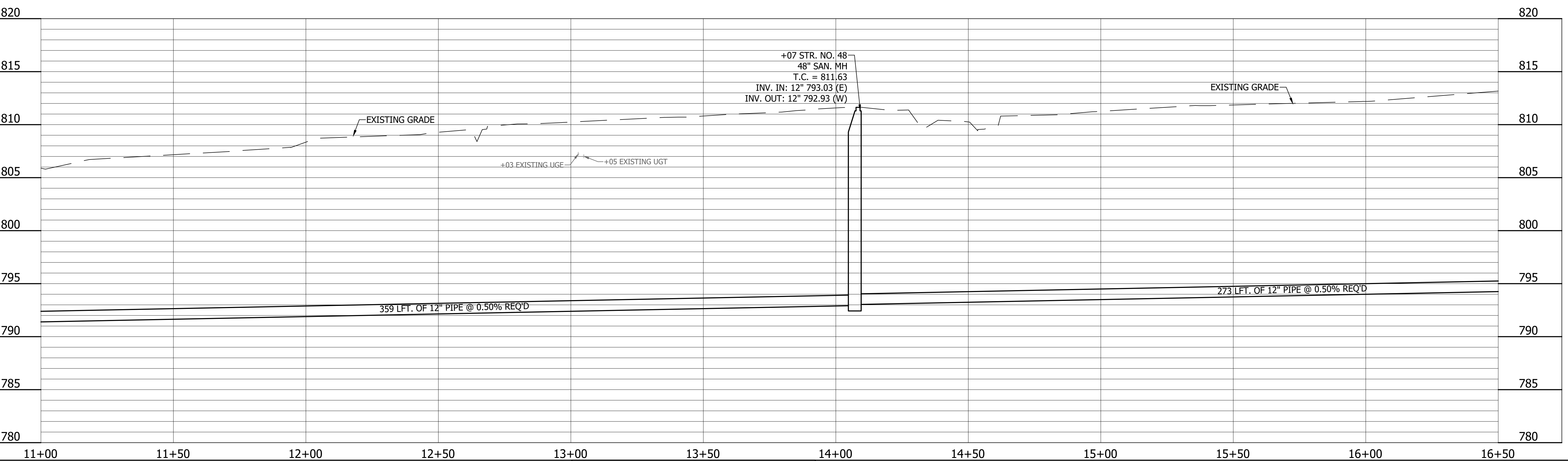
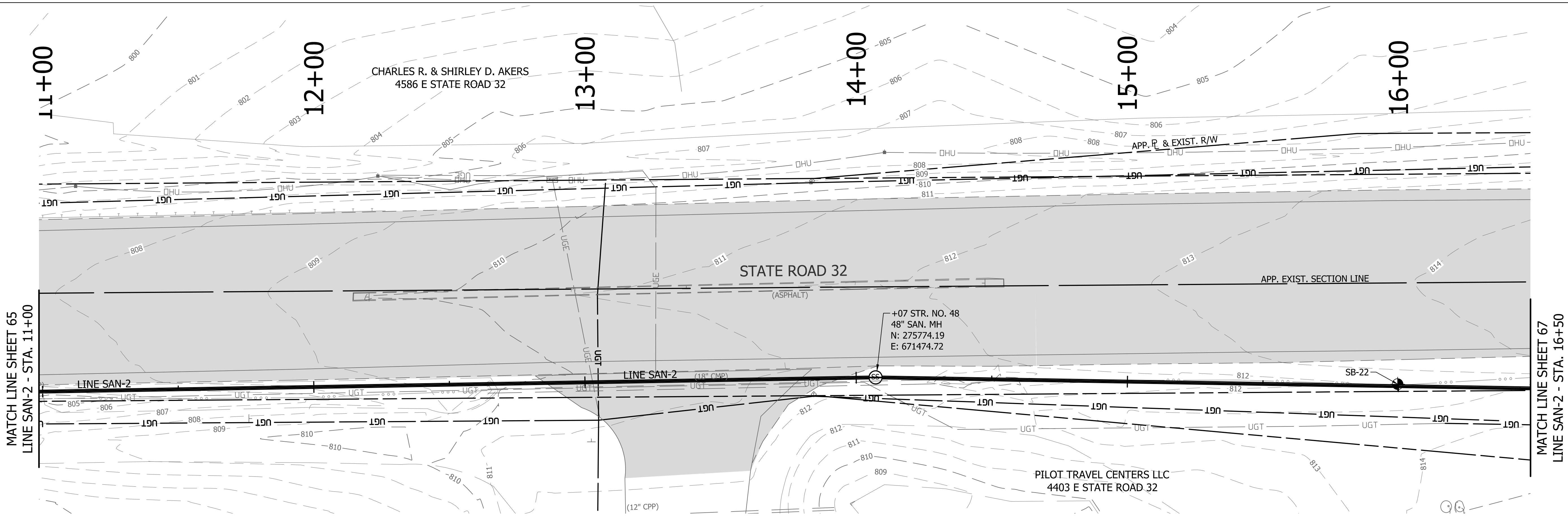
REVISIONS			
NO.	DATE	DESCRIPTION	BY



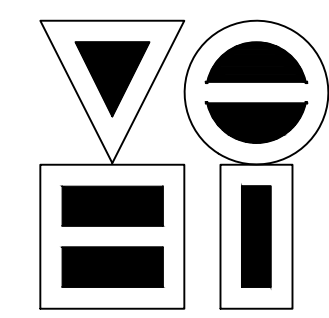
RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED:	KDK	DATE
DRAWN:	KDK	
CHECKED:	SJW	
	SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
 GRAVITY SEWER - LINE SAN-2
 PLAN/PROFILE

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	65 of 126
PROJECT	15-3371

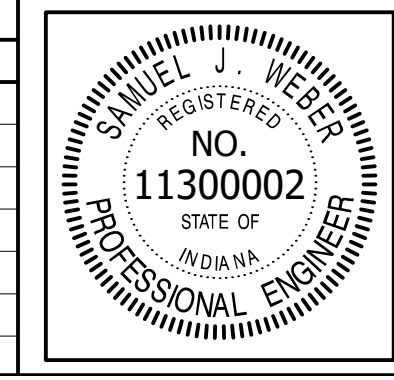


DIRECTORY: F:\2015\15-3371_SR32 Collection System and Septage Receiving Station\Drawings\03-Plan and Profiles
 FILE: 15-3371_PP_LINE SAN-2.dwg
 DIMSCALE: 1/8"=1'-0"
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:07pm



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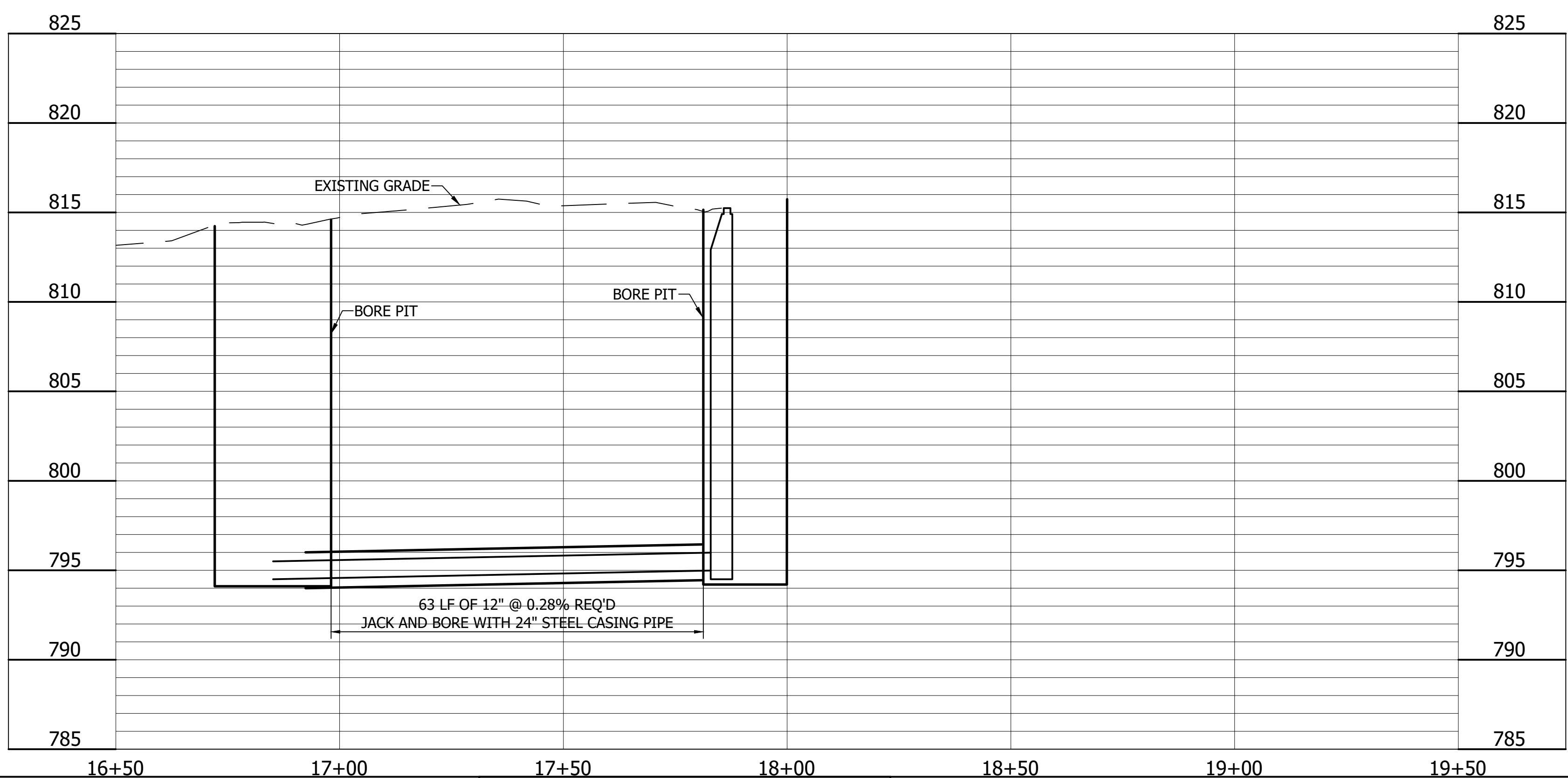
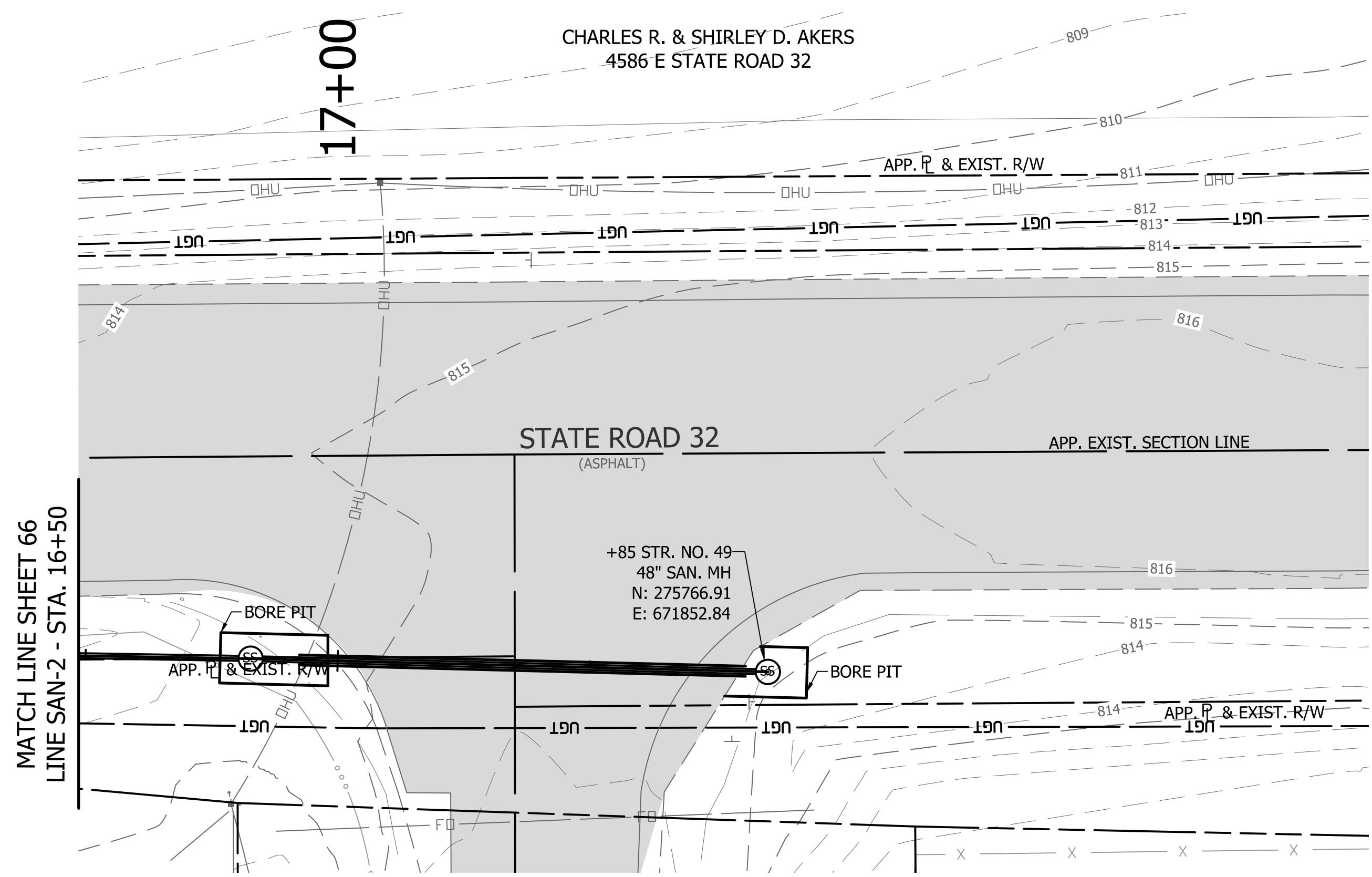
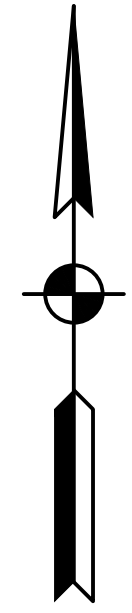
REVISIONS			
NO.	DATE	DESCRIPTION	BY



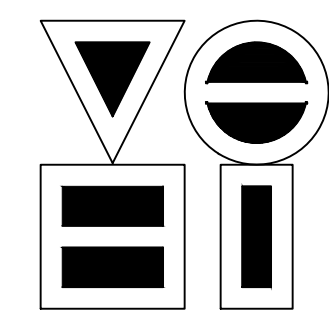
RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED:	KDK	DRAWN:
CHECKED:	SJW	CHECKED:

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
 GRAVITY SEWER - LINE SAN-2
 PLAN/PROFILE

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	66 of 126
PROJECT	15-3371

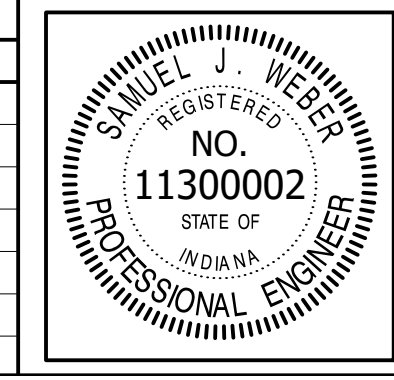


DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\03-Plan and Profiles\
 FILE: PP LINE SAN-2.dwg
 DIMSCALE: 1/8"=1'-0"
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:48pm



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REVISIONS			
NO.	DATE	DESCRIPTION	BY

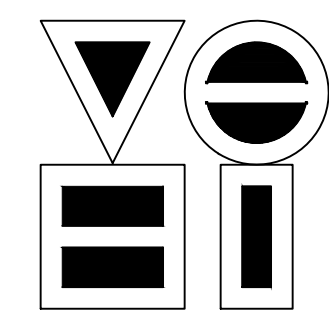
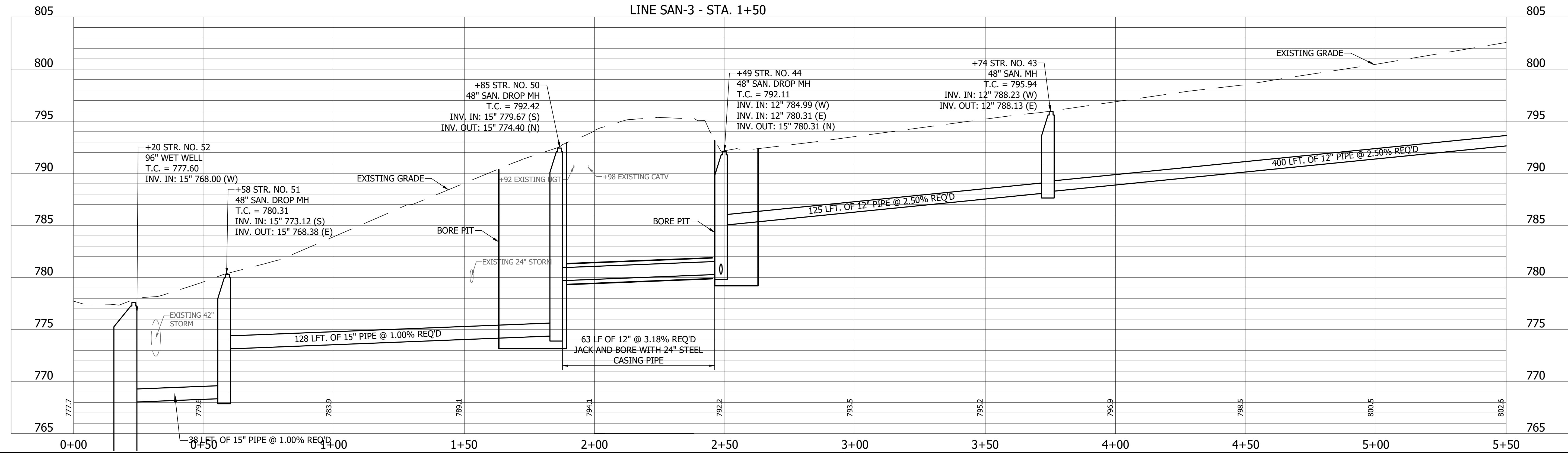
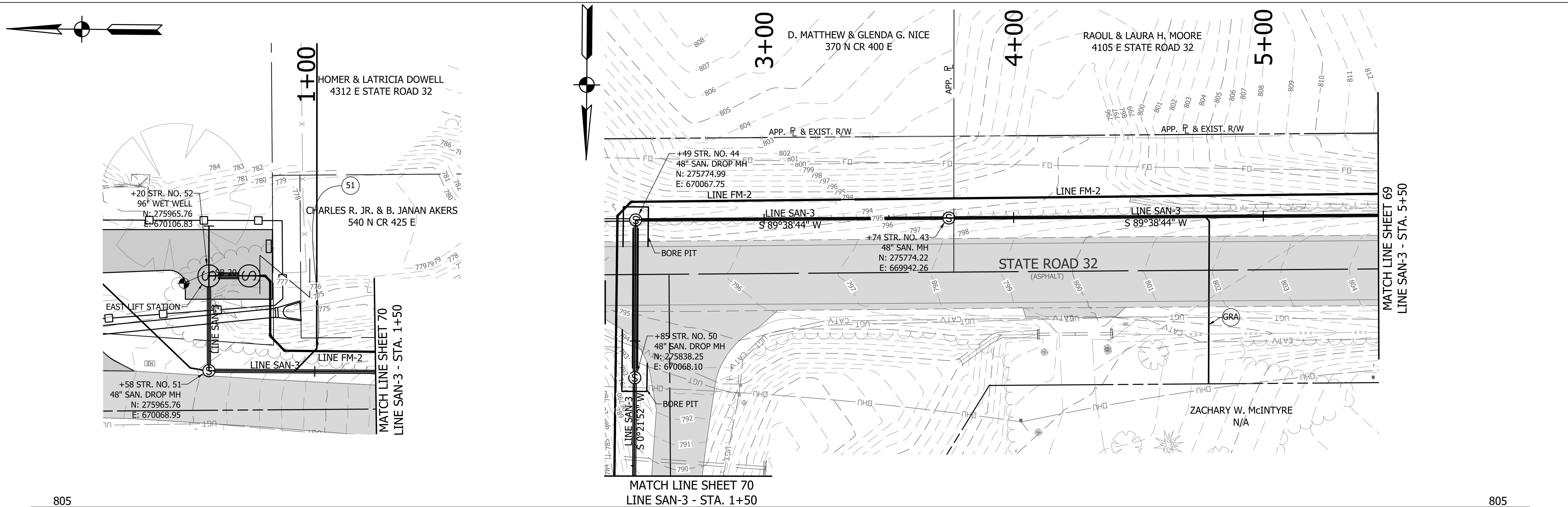


RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED:	KDK	DRAWN:
CHECKED:	SJW	CHECKED:

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
 GRAVITY SEWER - LINE SAN-2
 PLAN/PROFILE

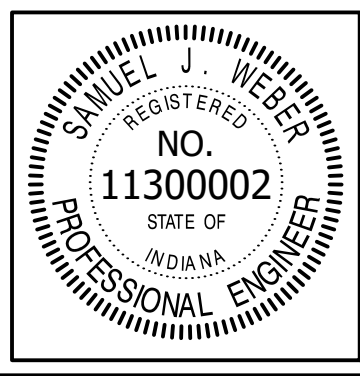
HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	67 of 126
PROJECT	15-3371

DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\03-Plan and Profiles
 FILE: PP LINE SAN-3.dwg
 DIMSCALE: 1/4" = 1' LTSCALE: 20
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:48pm



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 4275 North High School Road
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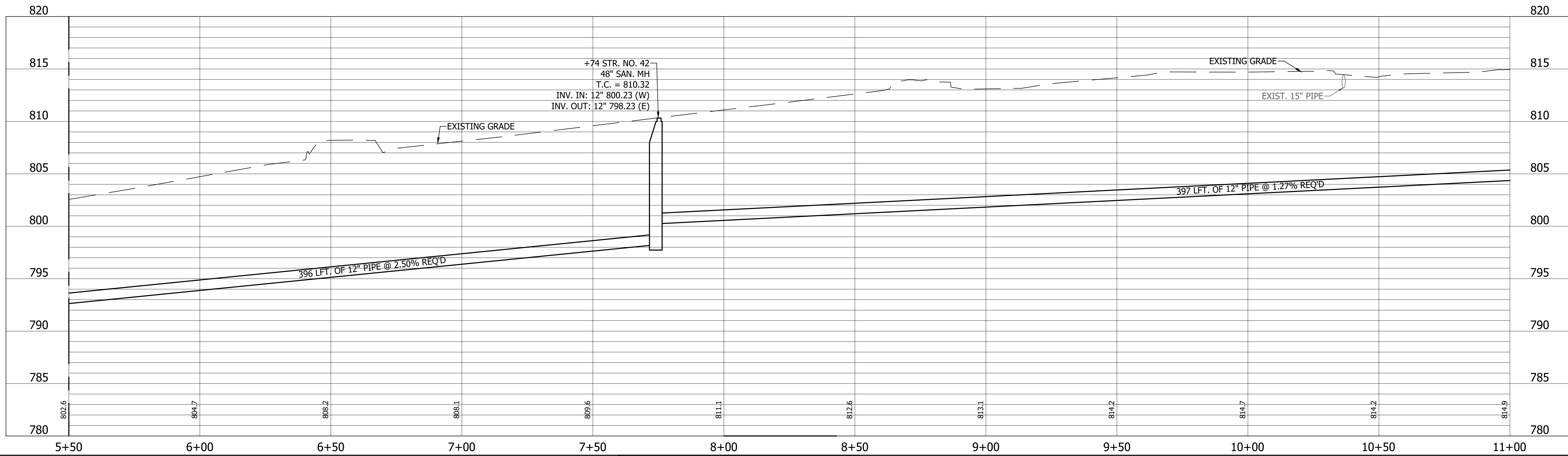
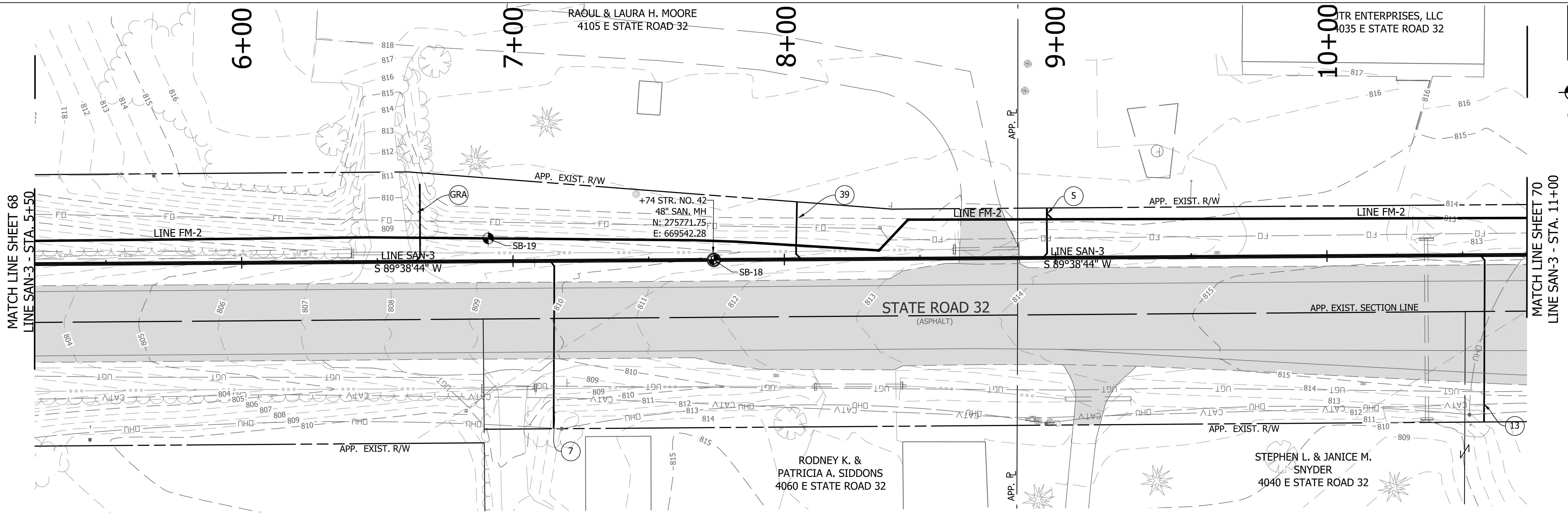
REVISIONS			
NO.	DATE	DESCRIPTION	BY



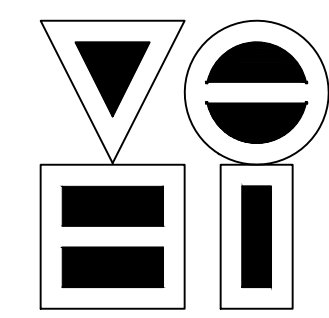
RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED: KDK	DRAWN: KDK	DATE
CHECKED: SJW	CHECKED: SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
GRAVITY SEWER - LINE SAN-3
 PLAN/PROFILE

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	68 of 126
PROJECT	15-3371

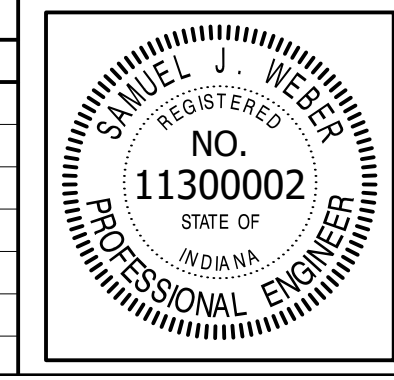


DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\03-Plan and Profiles\
 FILE: 15_PP_LINE SAN-3.dwg
 DIMSCALE: 1/4" = 1' LTSCALE: 20
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:49pm



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 vse@vsengineering.com www.vsengineering.com
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REVISIONS			
NO.	DATE	DESCRIPTION	BY

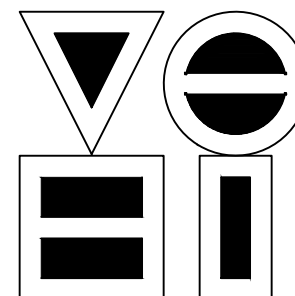
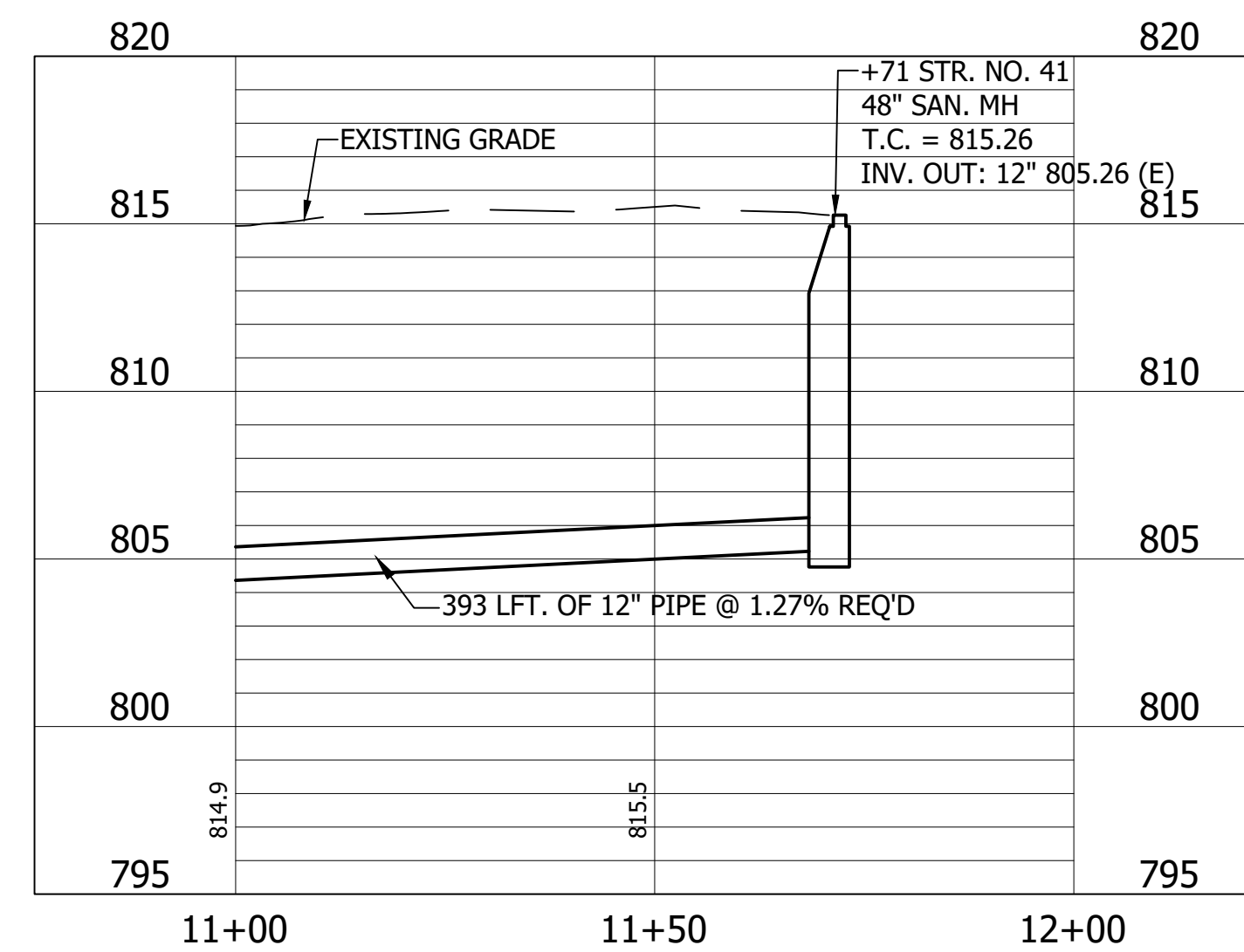
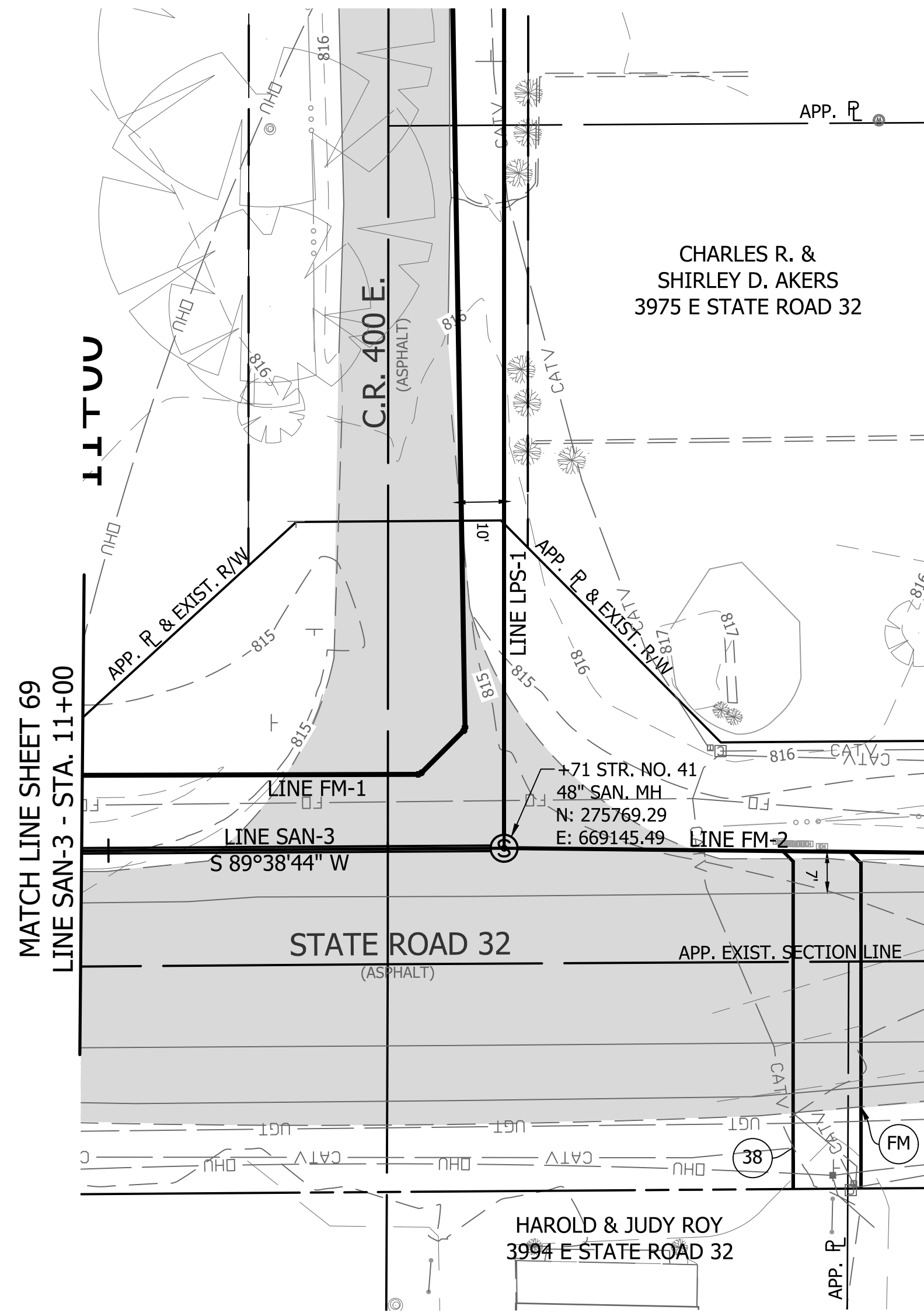


RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED:	KDK	DRAWN:
CHECKED:	SJW	CHECKED:

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
GRAVITY SEWER - LINE SAN-3
 PLAN/PROFILE

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	69 of 126
PROJECT	15-3371

DIRECTORY: F:\2015\15-3371_SR32_Collection System and Septage Receiving Station\Drawings\03-Plan and Profiles
 FILE: PP LINE SAN-3.dwg
 DIMSCALE: 1/4" = 1' LTSCALE: 20
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:49pm

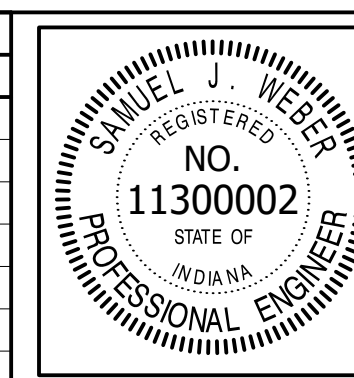


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 Fax: (317) 293-4737

REVISIONS			
NO.	DATE	DESCRIPTION	BY

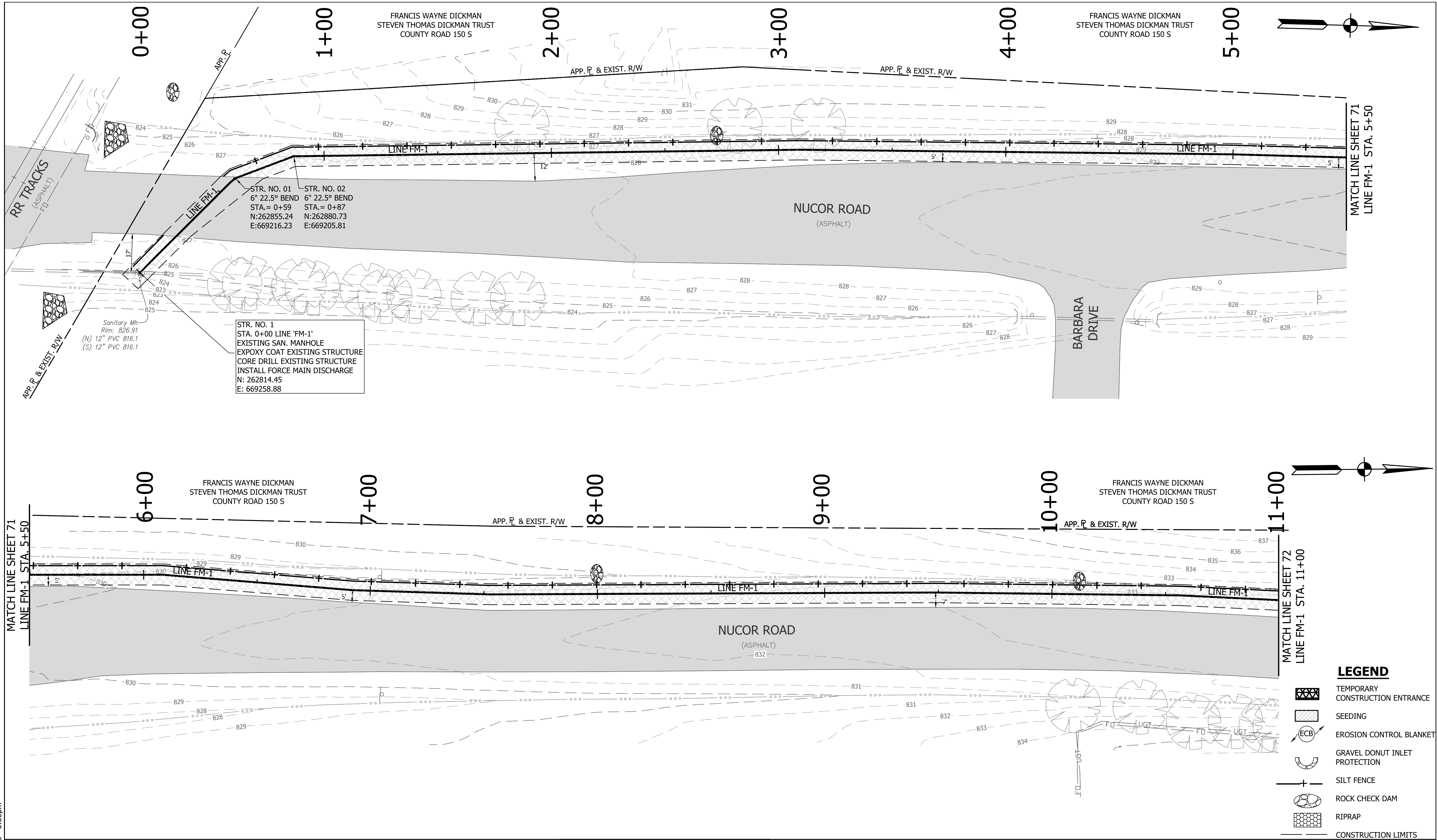


RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
	DESIGN ENGINEER	DATE
DESIGNED: KDK	DRAWN: KDK	
CHECKED: SJW	CHECKED: SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM	
GRAVITY SEWER - LINE SAN-3 PLAN/PROFILE	

HORIZONTAL SCALE	
1" = 20'	
VERTICAL SCALE	
1" = 5'	
SHEETS	
70	of 126
PROJECT	
15-3371	

DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\3-Erosion Control\FILE: EC LINE FM-1.dwg
 DIMSCALE: 1"=20'
 PLOTTED BY: J.Mowery
 DATE: Jun 06, 2018 - 6:50pm

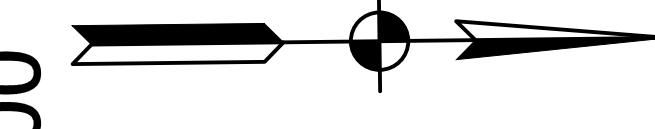
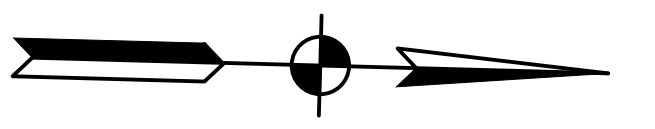


STR. NO. 01
 6" 22.5° BEND
 STA. = 0+59
 N: 262855.24
 E: 669216.23

STR. NO. 02
 6" 22.5° BEND
 STA. = 0+87
 N: 262880.73
 E: 669205.81

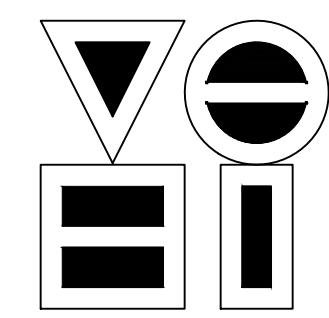
STR. NO. 1
 STA. 0+00 LINE 'FM-1'
 EXISTING SAN. MANHOLE
 EXPOXY COAT EXISTING STRUCTURE
 CORE DRILL EXISTING STRUCTURE
 INSTALL FORCE MAIN DISCHARGE
 N: 262814.45
 E: 669258.88

Sanitary Mh
 Rim: 826.91
 (N) 12" PVC 816.1
 (S) 12" PVC 816.1



LEGEND

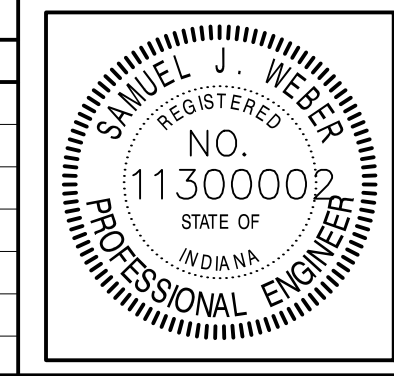
- TEMPORARY CONSTRUCTION ENTRANCE
- SEEDING
- EROSION CONTROL BLANKET
- GRAVEL DONUT INLET PROTECTION
- SILT FENCE
- ROCK CHECK DAM
- RIPRAP
- CONSTRUCTION LIMITS



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REVISIONS			
NO.	DATE	DESCRIPTION	BY

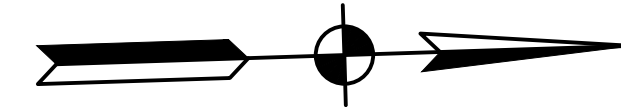
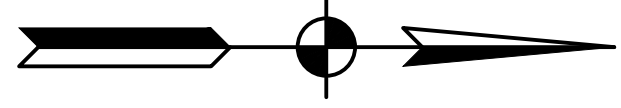
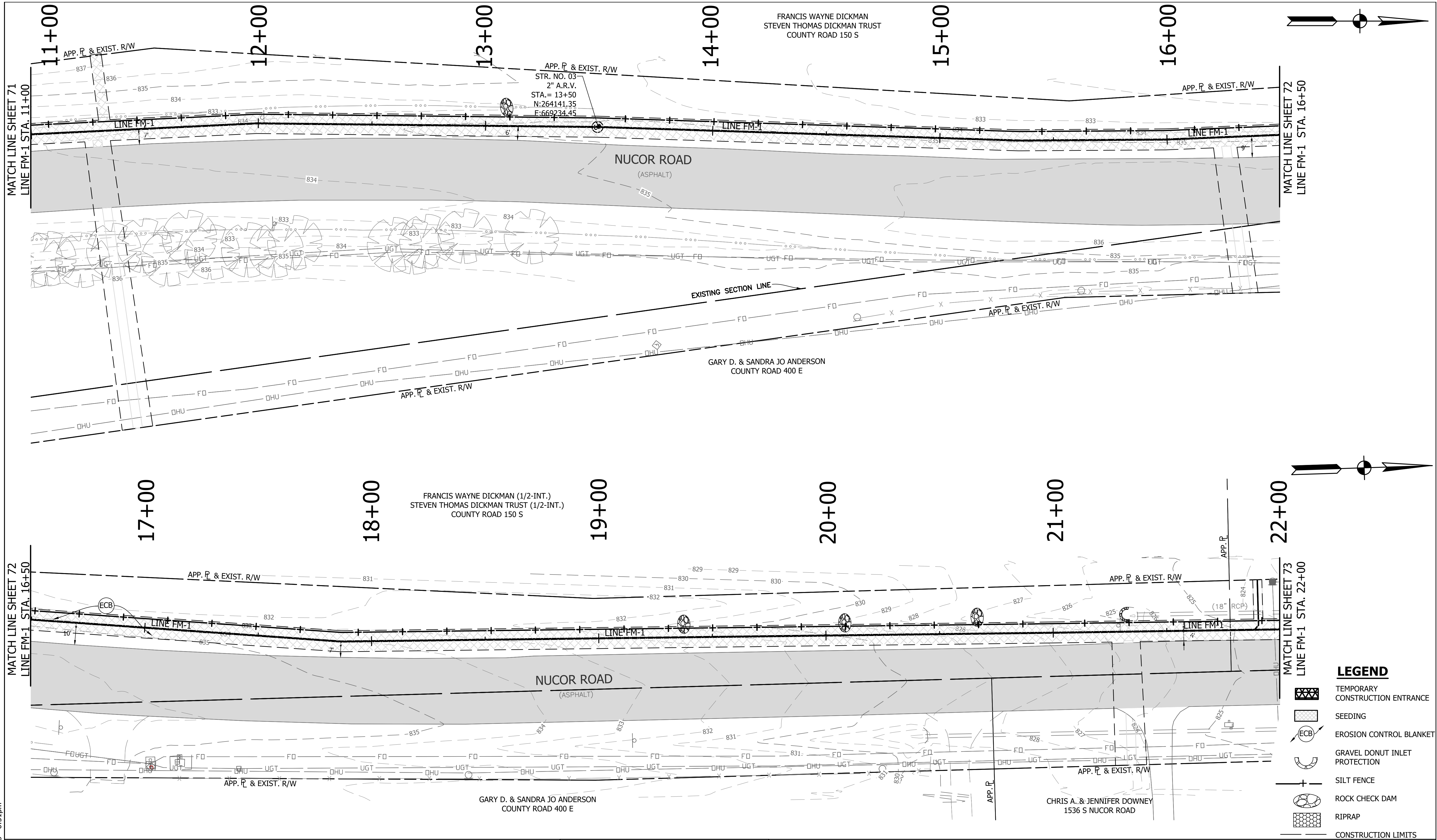


RECOMMENDED FOR APPROVAL		06/07/18
DESIGNED:	KDK	DRAWN:
CHECKED:	SJW	CHECKED:

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

**FORCE MAIN - LINE FM-1
 EROSION CONTROL PLAN**

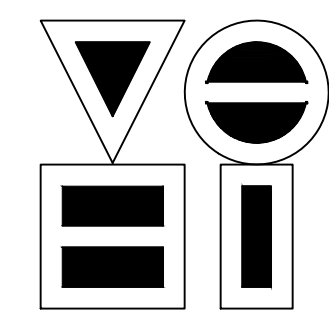
HORIZONTAL SCALE	
1" = 20'	
VERTICAL SCALE	
1" = 5'	
SHEETS	
71	of 126
PROJECT	
15-3371	



LEGEND

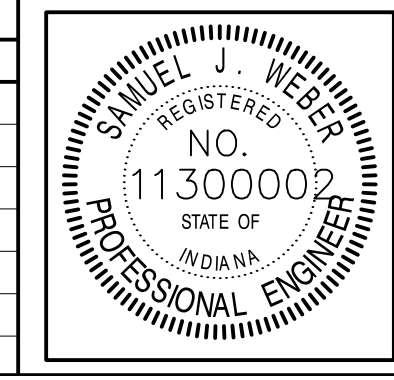
- TEMPORARY CONSTRUCTION ENTRANCE
- SEEDING
- EROSION CONTROL BLANKET
- GRAVEL DONUT INLET PROTECTION
- SILT FENCE
- ROCK CHECK DAM
- RIPRAP
- CONSTRUCTION LIMITS

DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\3-Erosion Control
 FILE: EC LINE FM-1.dwg
 DIMSCALE: 1/8"=1'-0"
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:51pm



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 vse@vsengineering.com www.vsengineering.com
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REVISIONS			
NO.	DATE	DESCRIPTION	BY

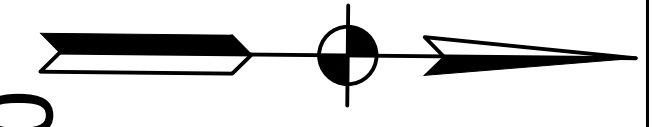
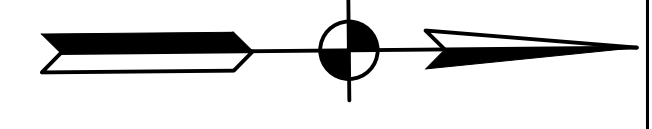
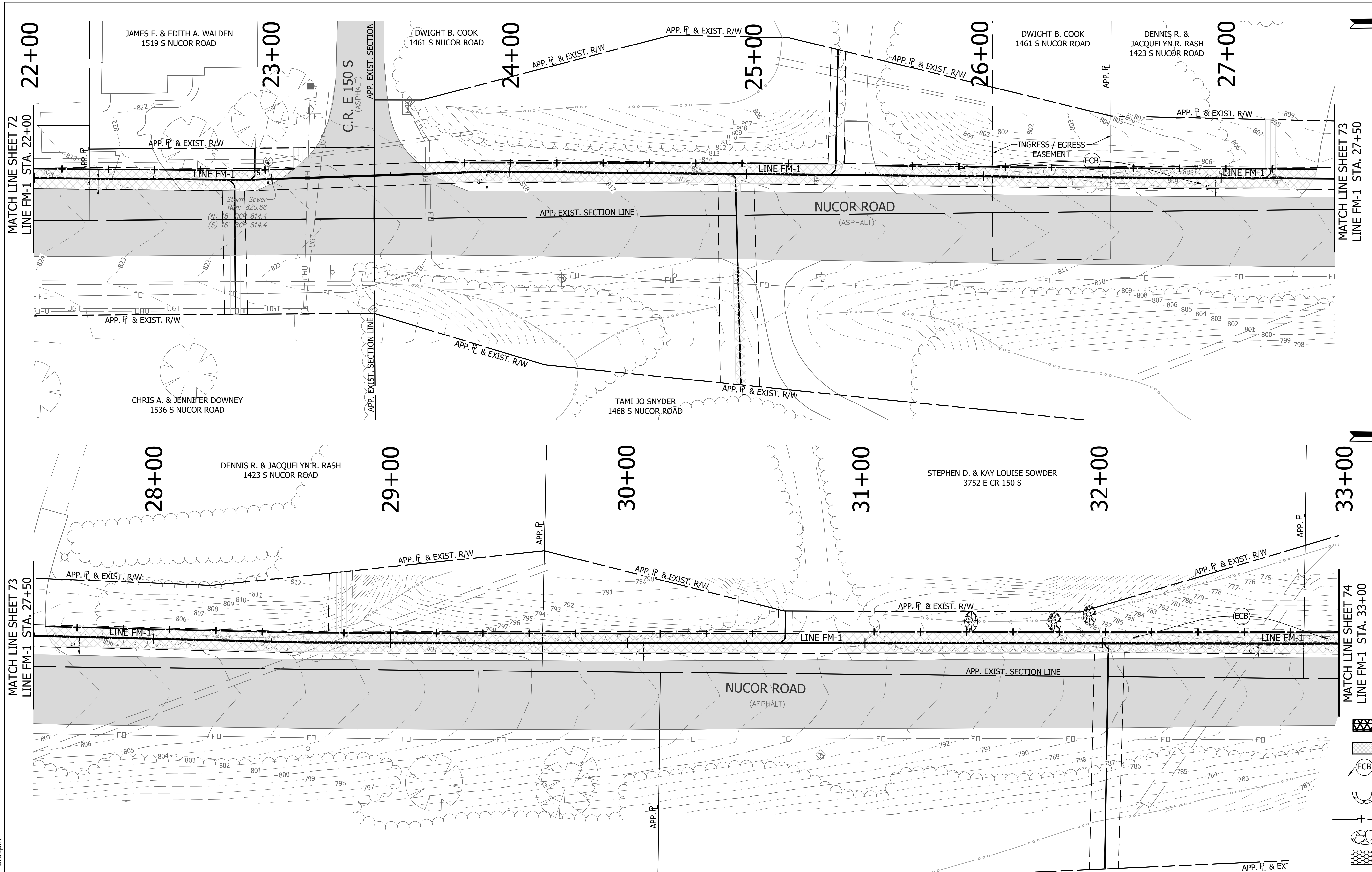


RECOMMENDED FOR APPROVAL		06/07/18
DESIGNED: KDK	DRAWN: KDK	DATE
CHECKED: SJW	CHECKED: SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

FORCE MAIN - LINE FM-1 EROSION CONTROL PLAN

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	72 of 126
PROJECT	15-3371



MATCH LINE SHEET 72
LINE FM-1 STA. 22+00

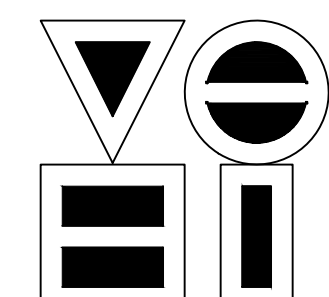
MATCH LINE SHEET 73
LINE FM-1 STA. 27+50

MATCH LINE SHEET 73
LINE FM-1 STA. 27+50

MATCH LINE SHEET 74
LINE FM-1 STA. 33+00

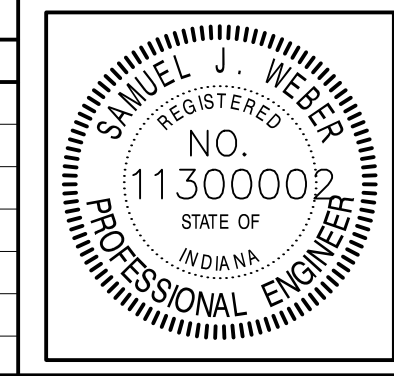
LEGEND

- TEMPORARY CONSTRUCTION ENTRANCE
- SEEDING
- EROSION CONTROL BLANKET
- GRAVEL DONUT INLET PROTECTION
- SILT FENCE
- ROCK CHECK DAM
- RIPRAP
- CONSTRUCTION LIMITS



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 4275 North High School Road Indianapolis, Indiana 46254
 vse@vsengineering.com www.vsengineering.com
 Phone: (317) 293-3542 Fax: (317) 293-4737

REVISIONS			
NO.	DATE	DESCRIPTION	BY



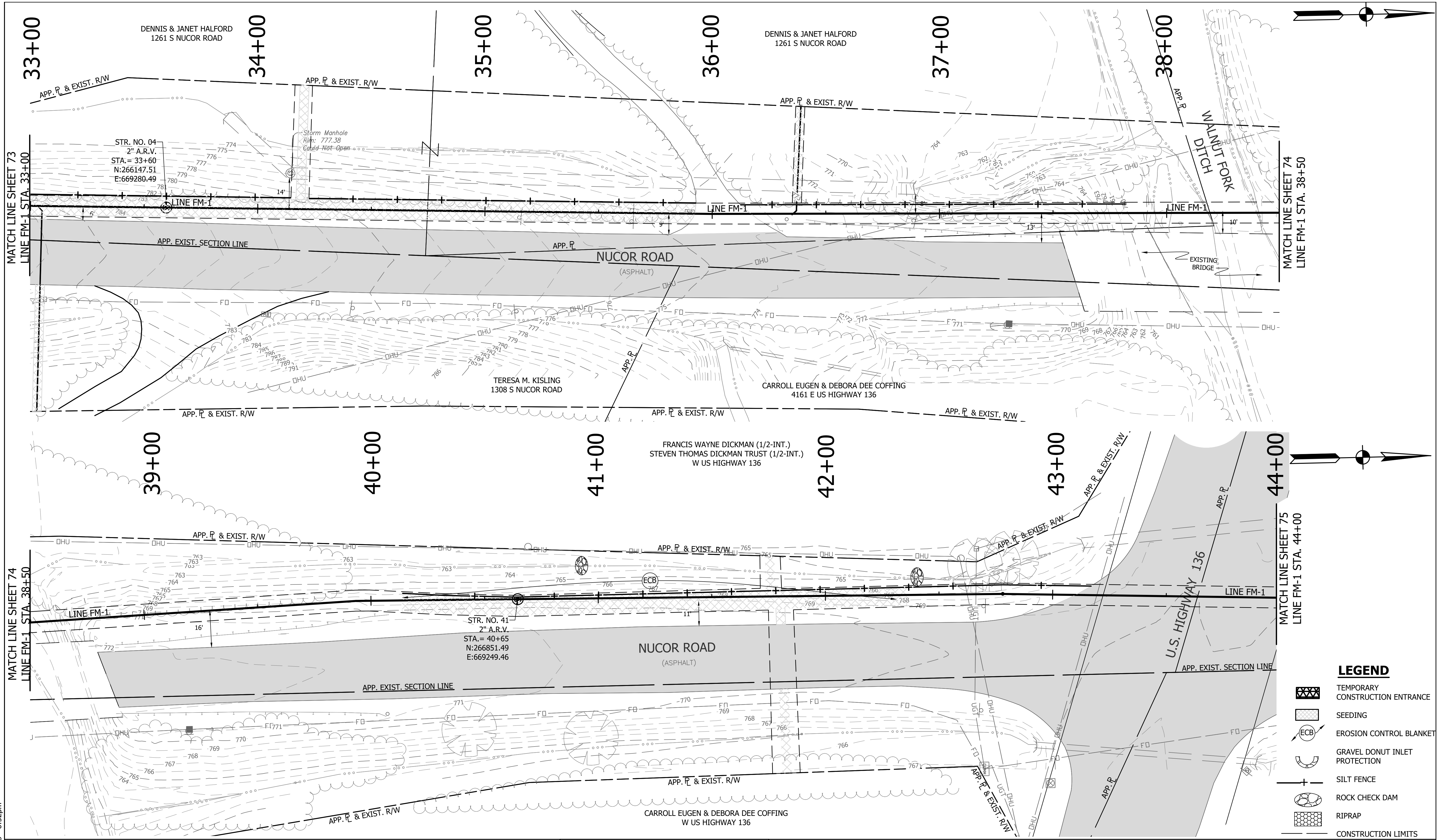
RECOMMENDED FOR APPROVAL		06/07/18
DESIGNED:	KDK	DRAWN:
CHECKED:	SJW	CHECKED:
		DATE

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

FORCE MAIN - LINE FM-1 EROSION CONTROL PLAN

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	73 of 126
PROJECT	15-3371

DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\3-Erosion Control
 FILE: EC LINE FM-1-1.dwg
 DIMSCALE: 1/8" = 1' LTSCALE: 20
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:51pm

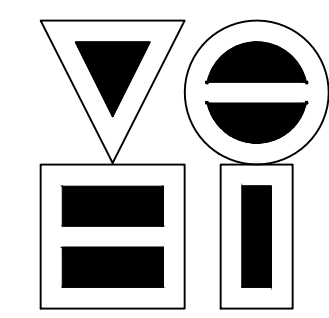


STR. NO. 04
2" A.R.V.
STA. = 33+60
N:266147.51
E:669280.49

STR. NO. 41
2" A.R.V.
STA. = 40+65
N:266851.49
E:669249.46

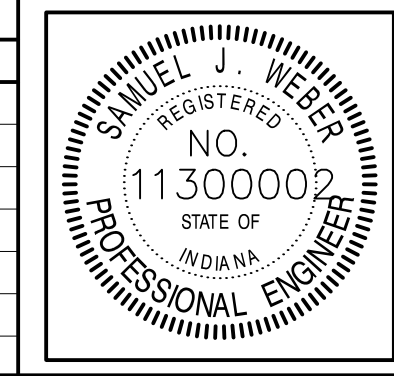
- LEGEND**
- TEMPORARY CONSTRUCTION ENTRANCE
 - SEEDING
 - EROSION CONTROL BLANKET
 - GRAVEL DONUT INLET PROTECTION
 - SILT FENCE
 - ROCK CHECK DAM
 - RIPRAP
 - CONSTRUCTION LIMITS

DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\3-Erosion Control
 FILE: EC LINE FM-1.dwg
 DIMSCALE: 1/4" = 1' LTSCALE: 20
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:52pm



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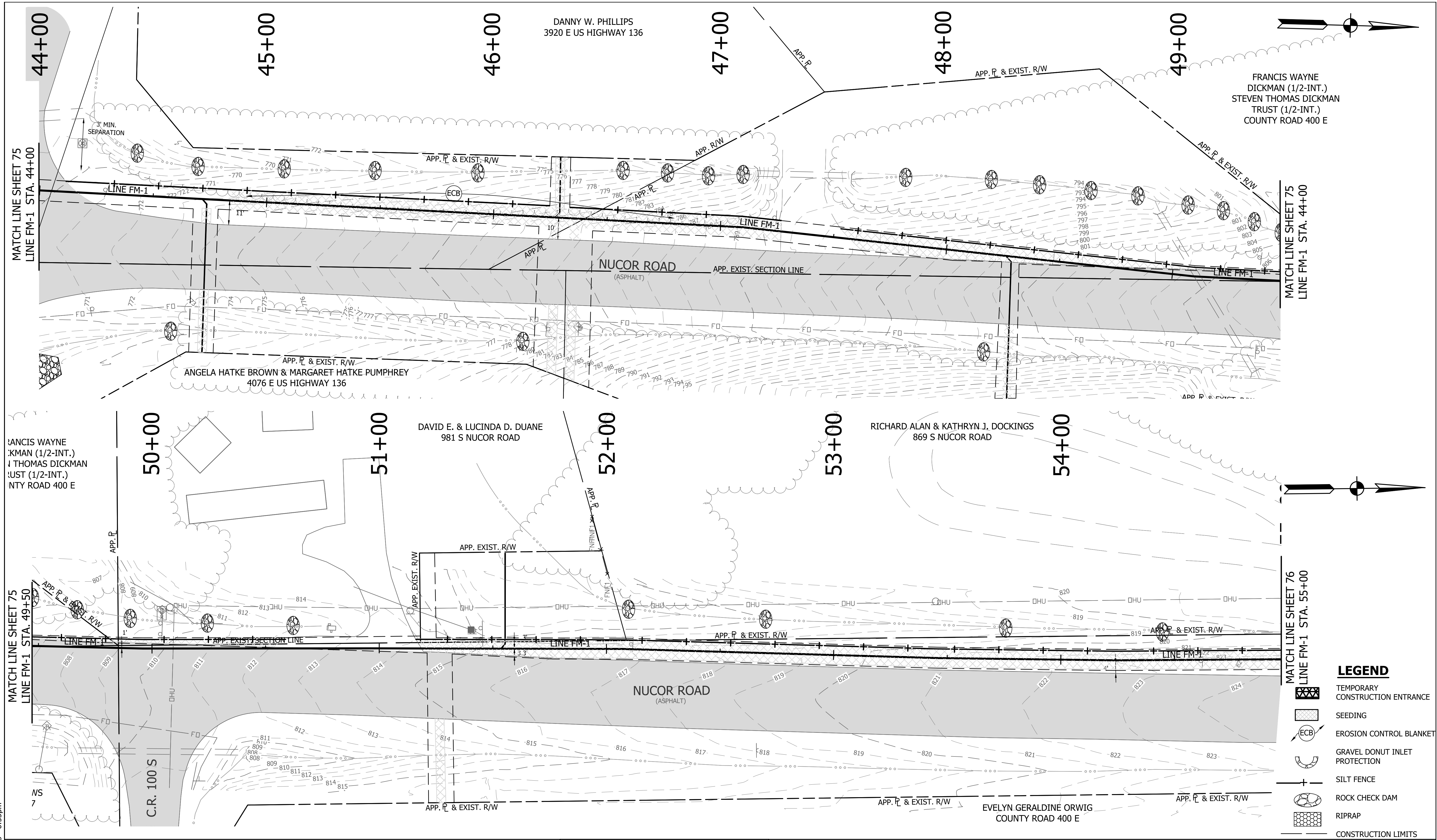
REVISIONS			
NO.	DATE	DESCRIPTION	BY



RECOMMENDED FOR APPROVAL		06/07/18
DESIGNED: KDK	DRAWN: KDK	DATE
CHECKED: SJW	CHECKED: SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
FORCE MAIN - LINE FM-1 EROSION CONTROL PLAN

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	74 of 126
PROJECT	15-3371



FRANCIS WAYNE
DICKMAN (1/2-INT.)
STEVEN THOMAS DICKMAN
TRUST (1/2-INT.)
COUNTY ROAD 400 E

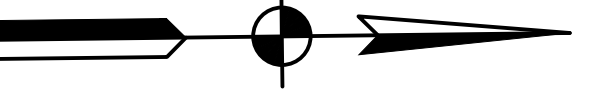
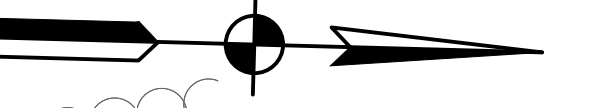
ANGELA HATKE BROWN & MARGARET HATKE PUMPHREY
4076 E US HIGHWAY 136

DAVID E. & LUCINDA D. DUANE
981 S NUCOR ROAD

RICHARD ALAN & KATHRYN J. DOCKINGS
869 S NUCOR ROAD

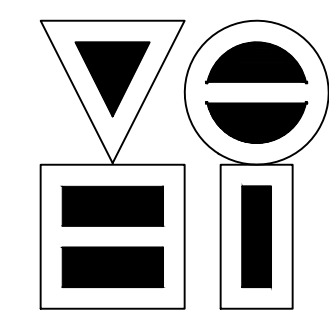
FRANCIS WAYNE
DICKMAN (1/2-INT.)
STEVEN THOMAS DICKMAN
TRUST (1/2-INT.)
COUNTY ROAD 400 E

EVELYN GERALDINE ORWIG
COUNTY ROAD 400 E



LEGEND

- TEMPORARY CONSTRUCTION ENTRANCE
- SEEDING
- EROSION CONTROL BLANKET
- GRAVEL DONUT INLET PROTECTION
- SILT FENCE
- ROCK CHECK DAM
- RIPRAP
- CONSTRUCTION LIMITS

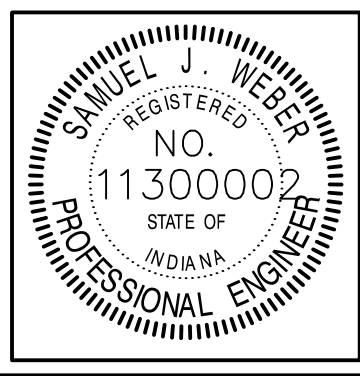


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24275 North High School Road
vsei@vsengineering.com
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Indianapolis, Indiana 46254
www.vsengineering.com
Fax: (317) 293-4737

REVISIONS			
NO.	DATE	DESCRIPTION	BY



RECOMMENDED FOR APPROVAL		06/07/18
DESIGNED:	KDK	DRAWN:
CHECKED:	SJW	CHECKED:

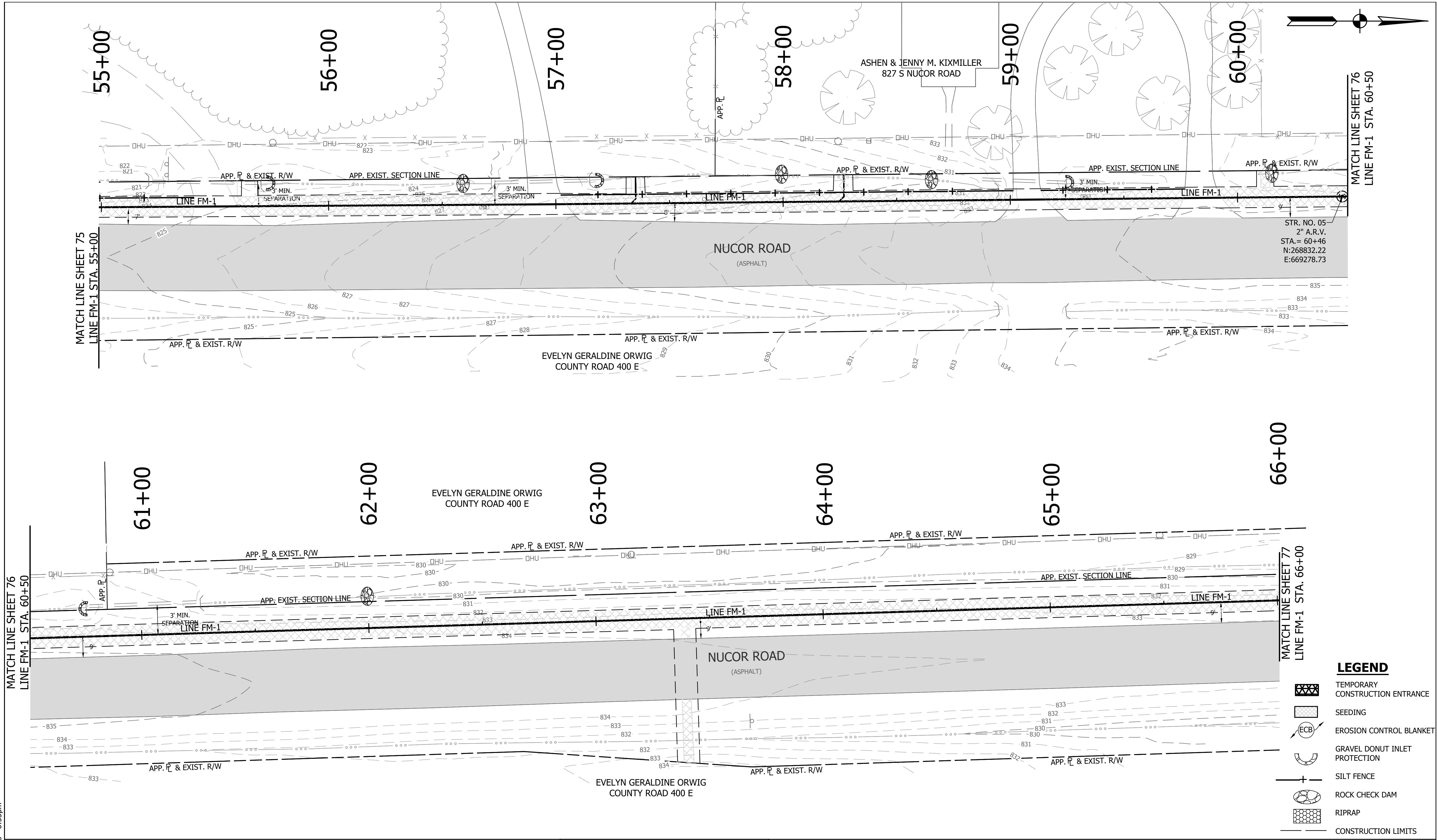
S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

**FORCE MAIN - LINE FM-1
EROSION CONTROL PLAN**

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	75 of 126
PROJECT	15-3371

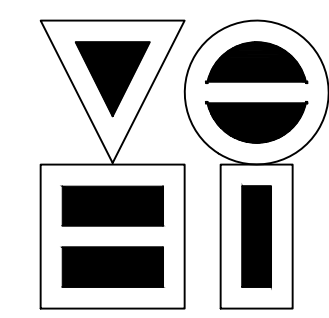
DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\3-Erosion Control
 FILE: EC LINE FM-1-2.dwg
 DIMSCALE: 1/4" = 1' LTSCALE: 20
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:53pm

DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\3-Erosion Control\FILE: EC LINE FM-1-2.dwg
 DIMSCALE: 1"=20'
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:53pm



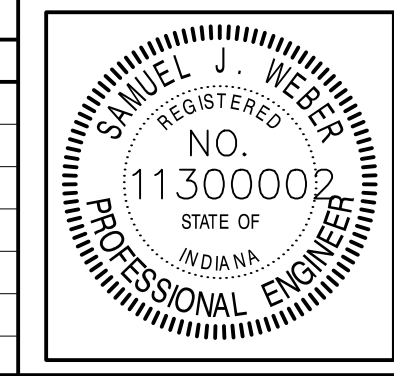
STR. NO. 05-
 2" A.R.V.
 STA. = 60+46
 N: 268832.22
 E: 669278.73

- LEGEND**
- TEMPORARY CONSTRUCTION ENTRANCE
 - SEEDING
 - EROSION CONTROL BLANKET
 - GRAVEL DONUT INLET PROTECTION
 - SILT FENCE
 - ROCK CHECK DAM
 - RIPRAP
 - CONSTRUCTION LIMITS



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REVISIONS			
NO.	DATE	DESCRIPTION	BY



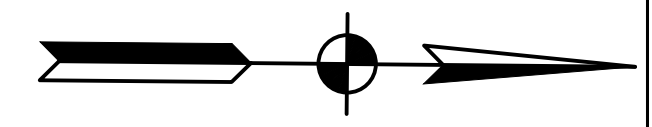
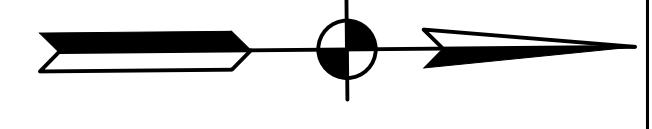
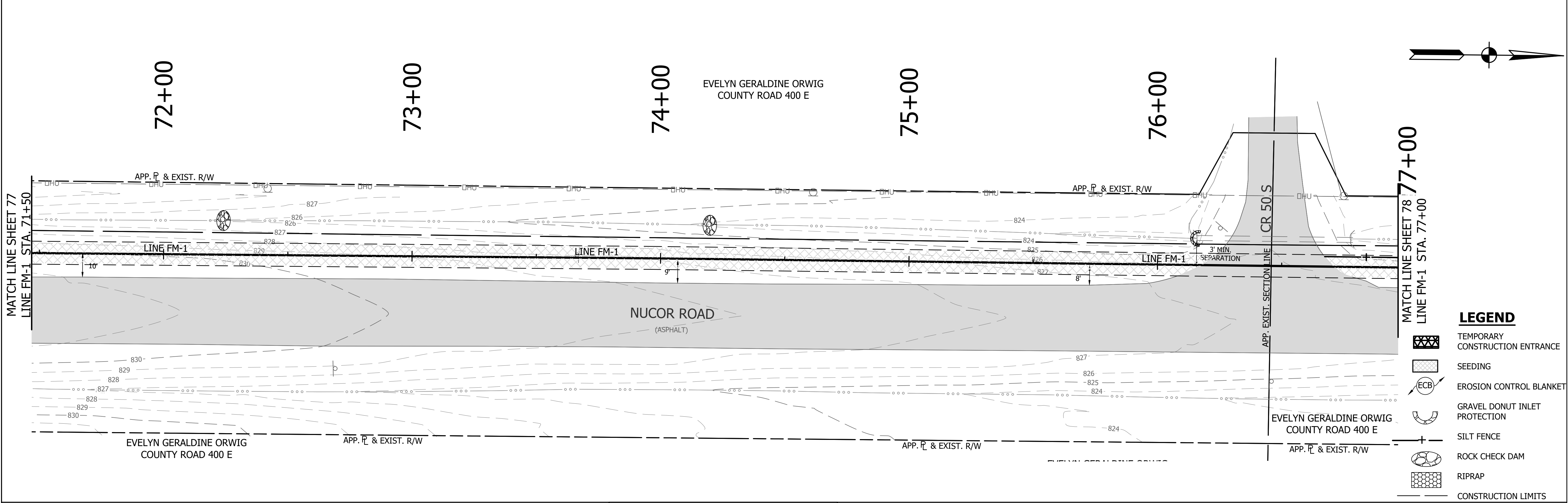
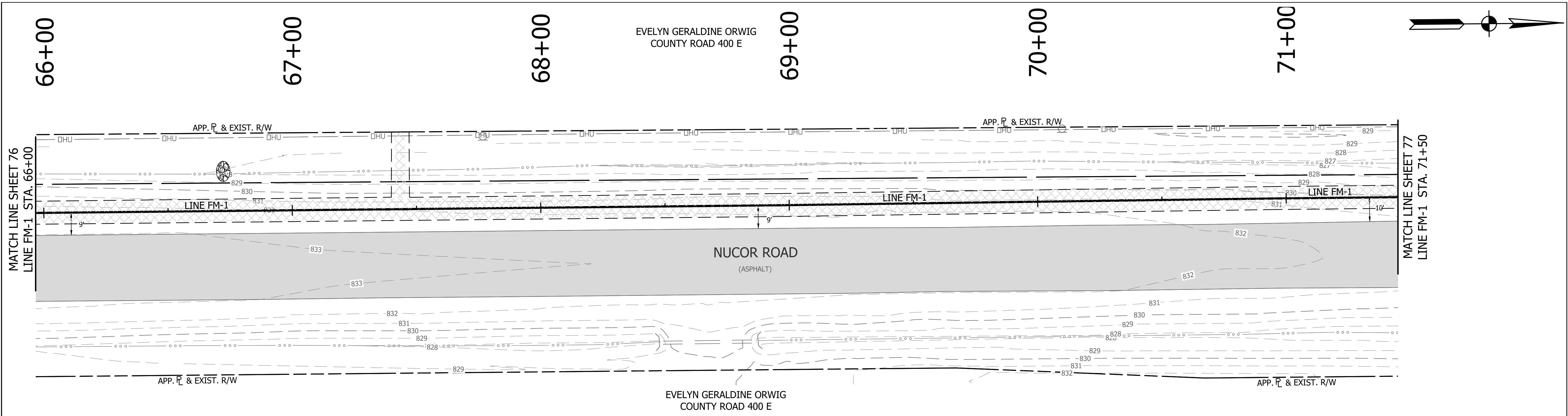
RECOMMENDED FOR APPROVAL		06/07/18
DESIGNED: KDK	DRAWN: KDK	DATE
CHECKED: SJW	CHECKED: SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

FORCE MAIN - LINE FM-1 EROSION CONTROL PLAN

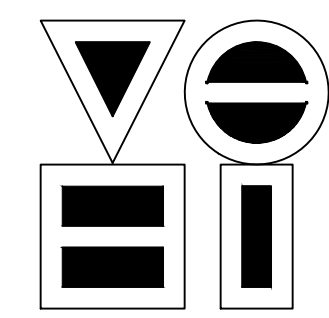
HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	76 of 126
PROJECT	15-3371

DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\3-Erosion Control\
 FILE: EC LINE FM-1 STA. 71+50.dwg
 DIMSCALE: 1"=20'
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:54pm



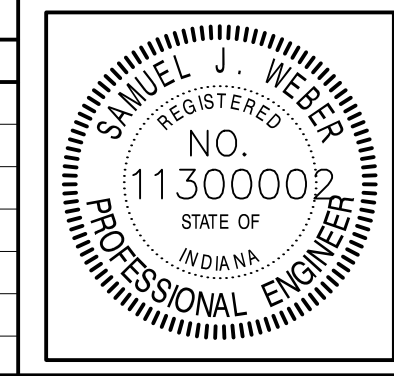
LEGEND

- TEMPORARY CONSTRUCTION ENTRANCE
- SEEDING
- EROSION CONTROL BLANKET
- GRAVEL DONUT INLET PROTECTION
- SILT FENCE
- ROCK CHECK DAM
- RIPRAP
- CONSTRUCTION LIMITS



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REVISIONS			
NO.	DATE	DESCRIPTION	BY

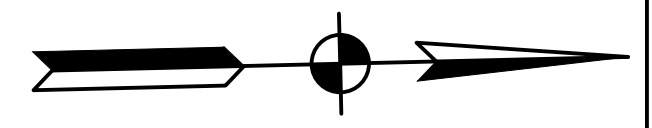
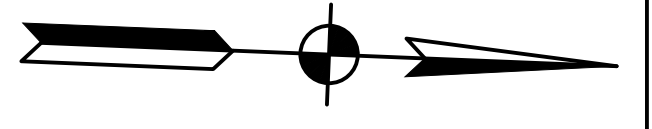
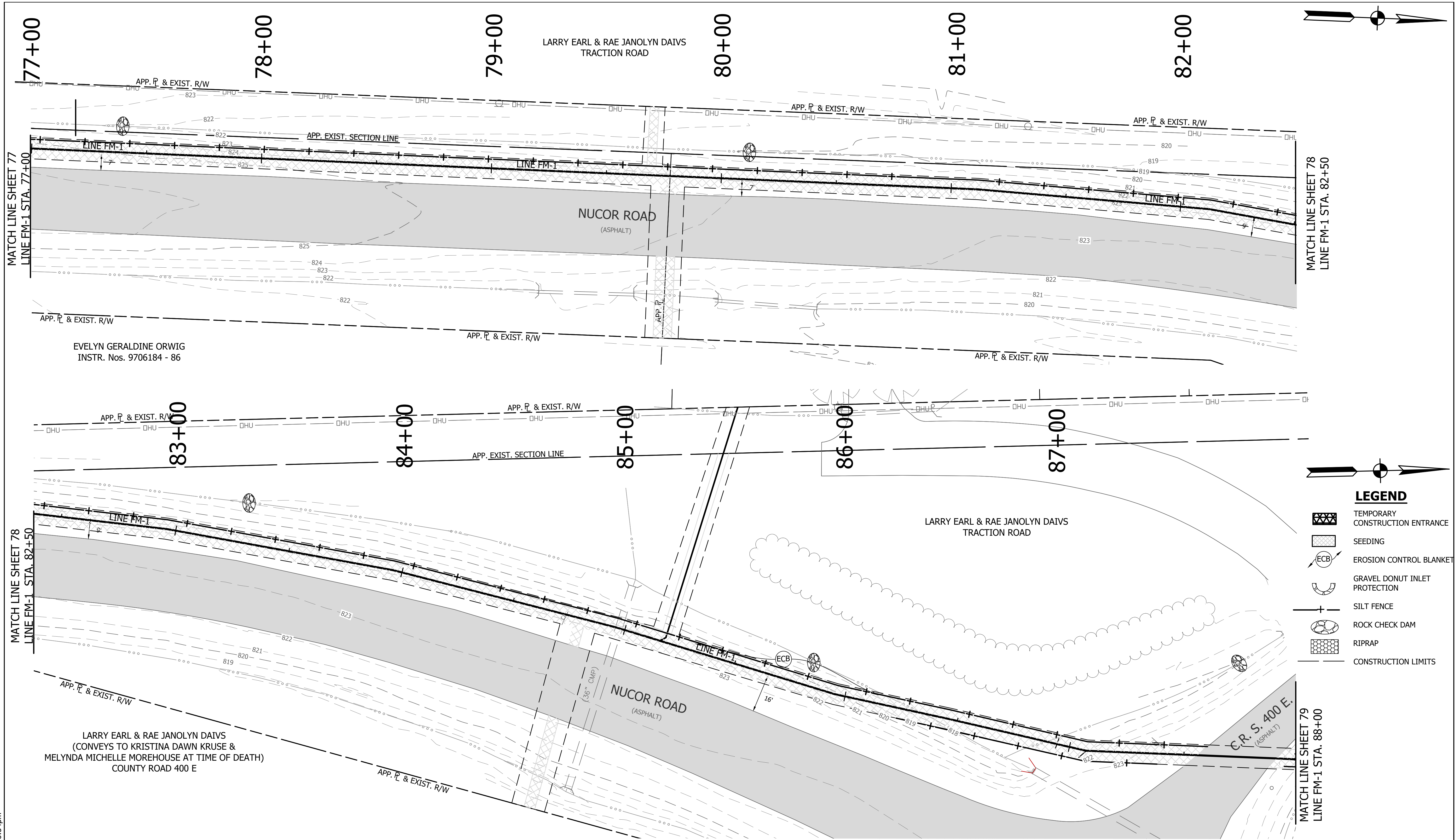


RECOMMENDED FOR APPROVAL		06/07/18
DESIGNED:	KDK	DRAWN:
CHECKED:	SJW	CHECKED:

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

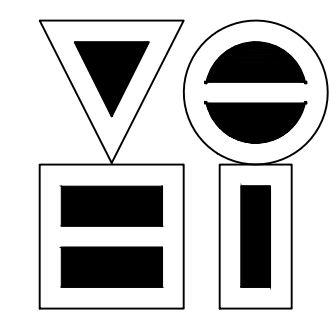
FORCE MAIN - LINE FM-1 EROSION CONTROL PLAN

HORIZONTAL SCALE	
1" = 20'	
VERTICAL SCALE	
1" = 5'	
SHEETS	
77	of 126
PROJECT	
15-3371	



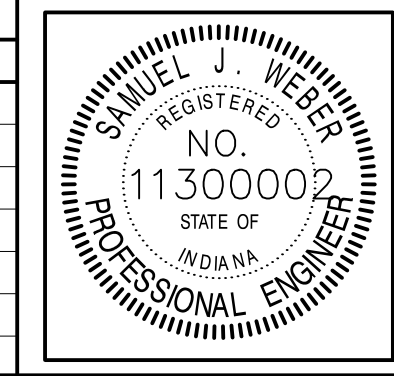
- LEGEND**
- TEMPORARY CONSTRUCTION ENTRANCE
 - SEEDING
 - EROSION CONTROL BLANKET
 - GRAVEL DONUT INLET PROTECTION
 - SILT FENCE
 - ROCK CHECK DAM
 - RIPRAP
 - CONSTRUCTION LIMITS

DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\3-Erosion Control\...
 FILE: ...EC LINE FM-1-2.dwg
 DIMSCALE: 1" = 20'
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:54pm



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REVISIONS			
NO.	DATE	DESCRIPTION	BY



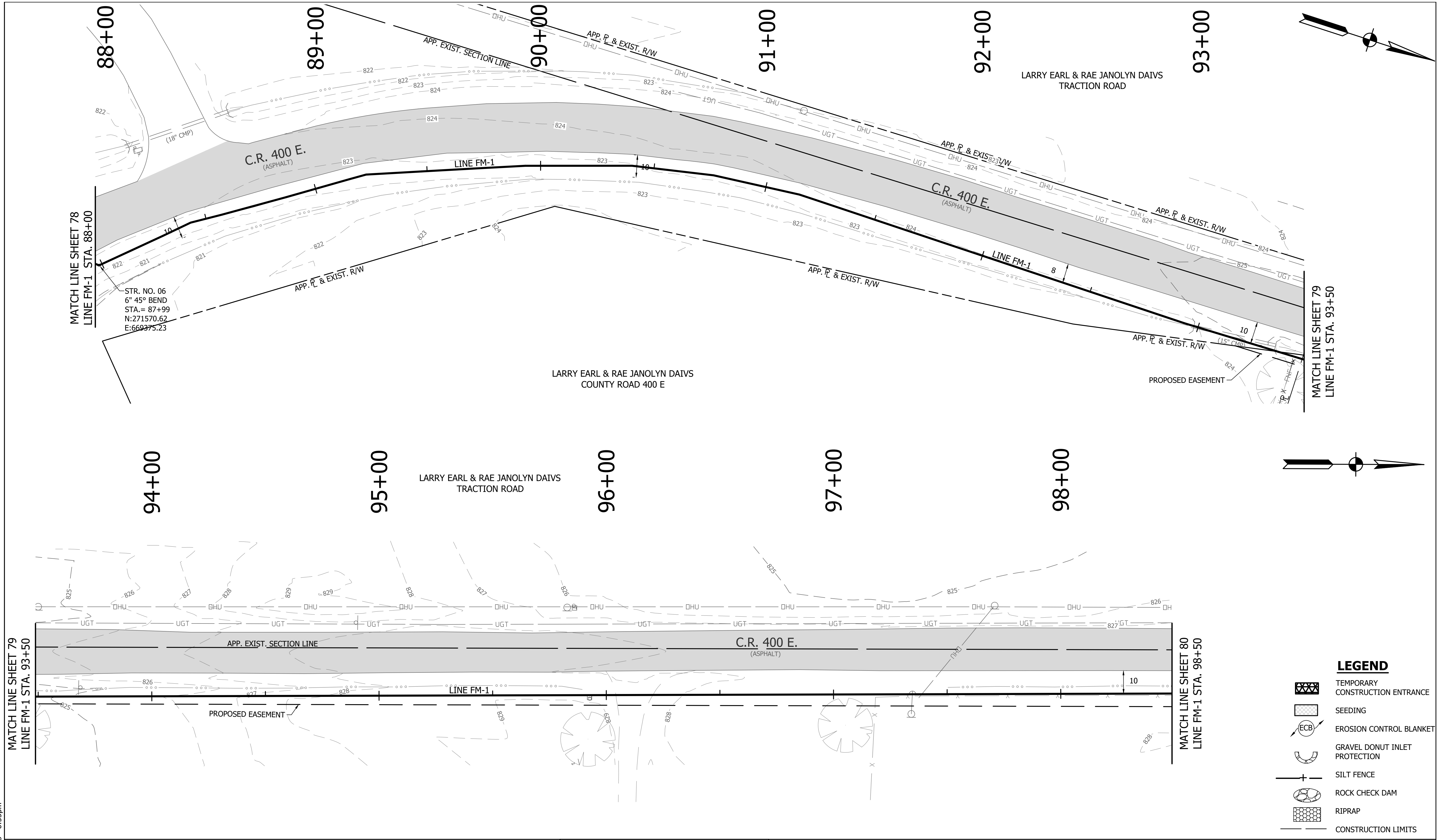
RECOMMENDED FOR APPROVAL		06/07/18
DESIGNED:	KDK	DRAWN:
CHECKED:	SJW	CHECKED:

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

FORCE MAIN - LINE FM-1 EROSION CONTROL PLAN

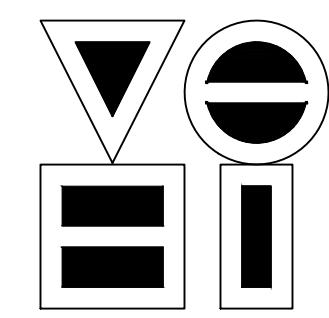
HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	78 of 126
PROJECT	15-3371

DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\3-Erosion Control\FILE: EC LINE FM-1 STA. 88+00.dwg
 DIMSCALE: 1"=20'
 PLOTTED BY: J.Mowery
 DATE: Jun 06, 2018 - 6:55pm



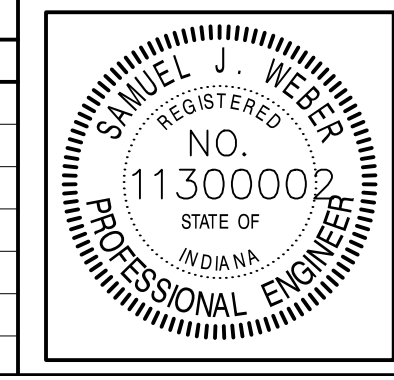
STR. NO. 06
 6" 45° BEND
 STA. = 87+99
 N: 271570.62
 E: 669375.23

- LEGEND**
- TEMPORARY CONSTRUCTION ENTRANCE
 - SEEDING
 - EROSION CONTROL BLANKET
 - GRAVEL DONUT INLET PROTECTION
 - SILT FENCE
 - ROCK CHECK DAM
 - RIPRAP
 - CONSTRUCTION LIMITS



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NO.	DATE	DESCRIPTION	BY



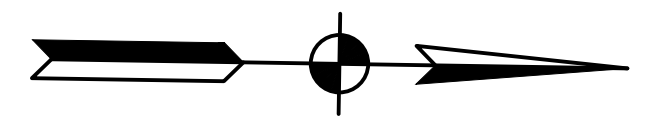
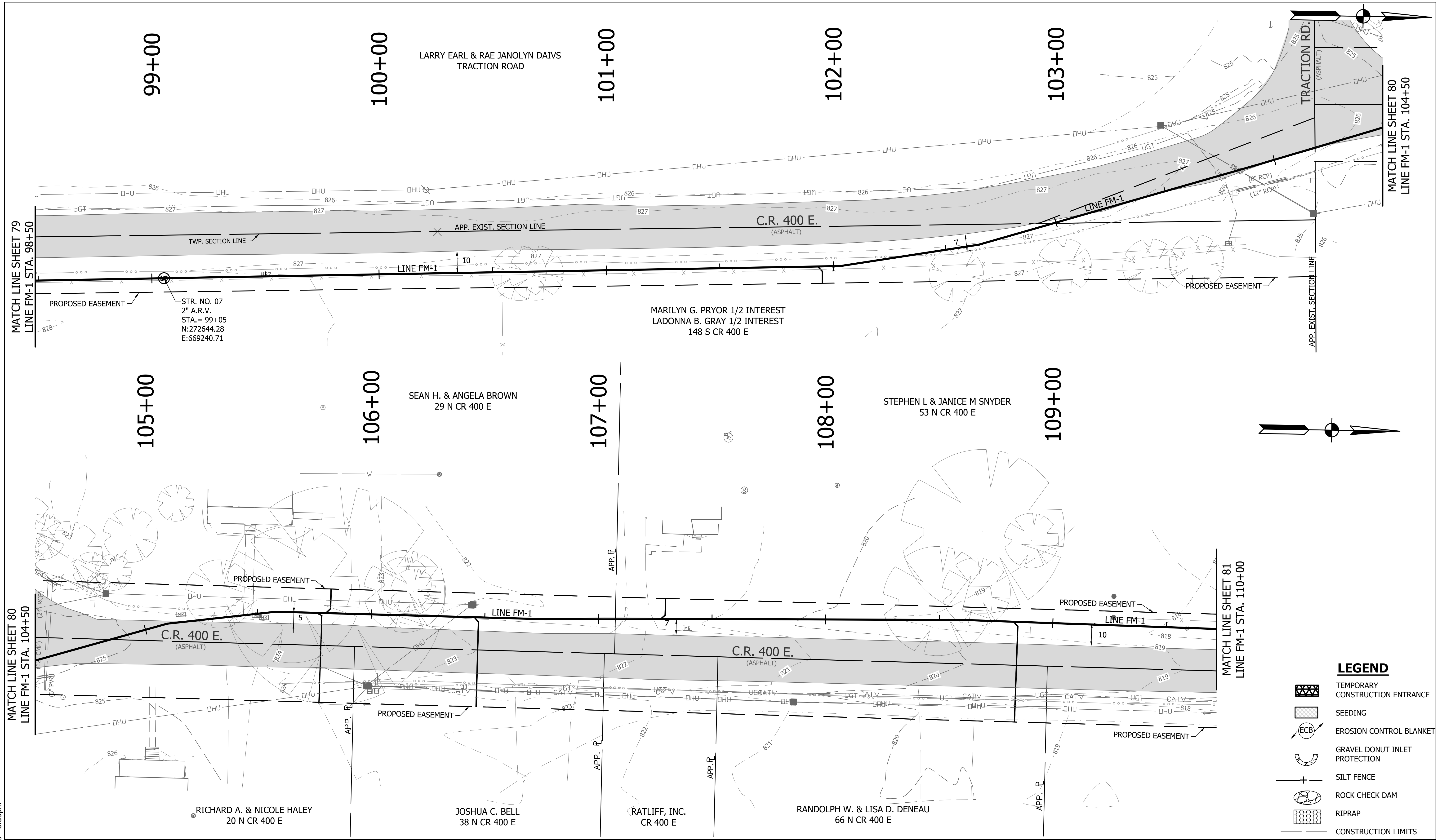
RECOMMENDED FOR APPROVAL		06/07/18
DESIGNED: KDK	DRAWN: KDK	DATE
CHECKED: SJW	CHECKED: SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM






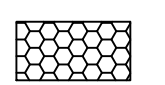


**FORCE MAIN - LINE FM-1
 EROSION CONTROL PLAN**

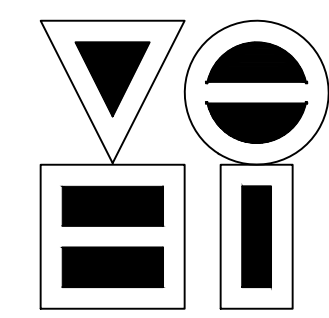
HORIZONTAL SCALE	
1" = 20'	
VERTICAL SCALE	
1" = 5'	
SHEETS	
79	of 126
PROJECT	
15-3371	

DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\3-Erosion Control\FILE: EC LINE FM-1-3.dwg
 DIMSCALE: 1"=50' LTSCALE: 20
 PLOTTED BY: J.Mowery
 DATE: Jun 06, 2018 - 6:55pm



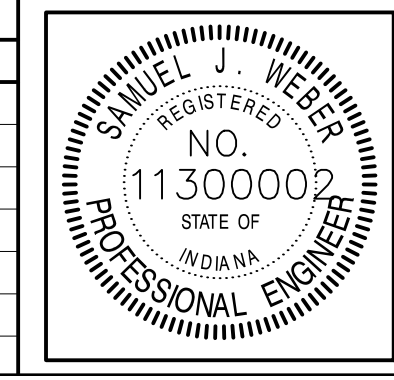
LEGEND


-  TEMPORARY CONSTRUCTION ENTRANCE
-  SEEDING
-  EROSION CONTROL BLANKET
-  GRAVEL DONUT INLET PROTECTION
-  SILT FENCE
-  ROCK CHECK DAM
-  RIPRAP
-  CONSTRUCTION LIMITS



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REVISIONS			
NO.	DATE	DESCRIPTION	BY



RECOMMENDED FOR APPROVAL		06/07/18
DESIGNED:	KDK	DRAWN:
CHECKED:	SJW	CHECKED:

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

FORCE MAIN - LINE FM-1 EROSION CONTROL PLAN

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	80 of 126
PROJECT	15-3371

110+00 ROBERT F. & BETTY I. MILES
BOOK 166, PAGE 427
JULY 1, 1958

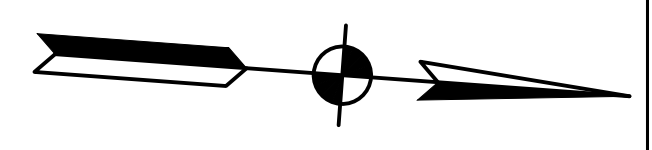
111+00

112+00

113+00 BRIAN L. & ELLA M. SWICK
165 N CR 400E

114+00

115+00

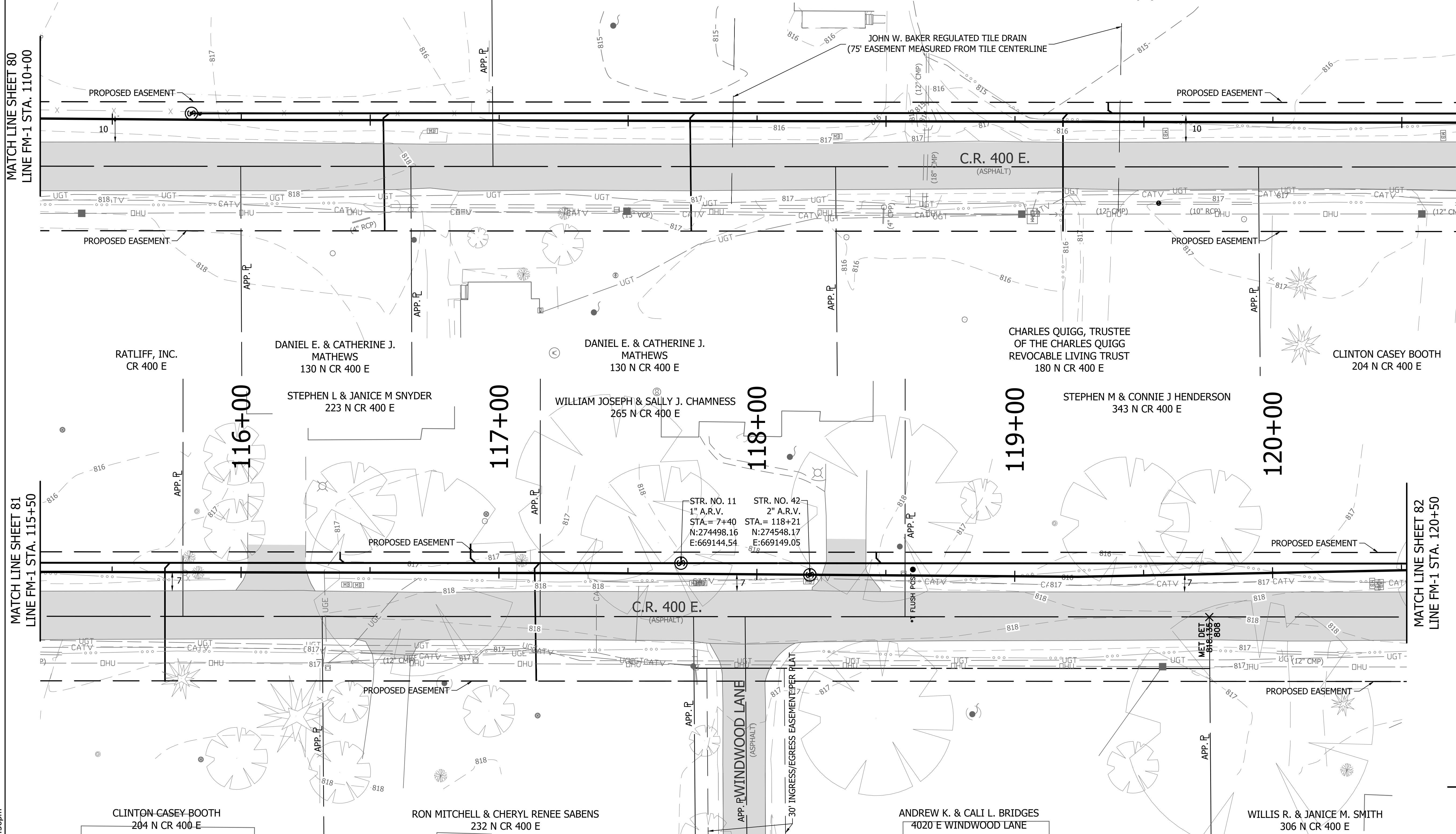


MATCH LINE SHEET 80
LINE FM-1 STA. 110+00

MATCH LINE SHEET 81
LINE FM-1 STA. 115+50

MATCH LINE SHEET 81
LINE FM-1 STA. 115+50

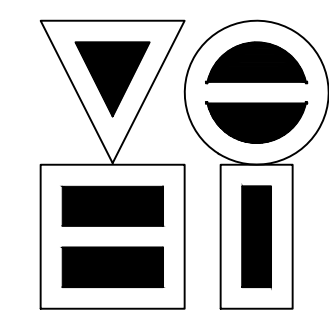
MATCH LINE SHEET 82
LINE FM-1 STA. 120+50



STR. NO. 11 STR. NO. 42
1" A.R.V. 2" A.R.V.
STA. = 7+40 STA. = 118+21
N: 274498.16 N: 274548.17
E: 669144.54 E: 669149.05

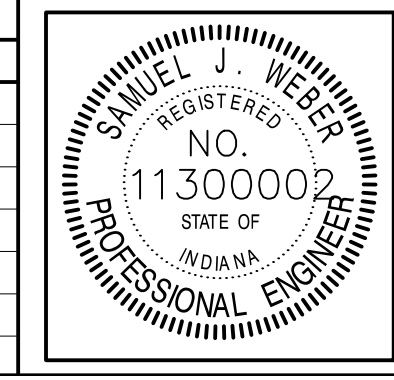
LEGEND

- TEMPORARY CONSTRUCTION ENTRANCE
- SEEDING
- EROSION CONTROL BLANKET
- GRAVEL DONUT INLET PROTECTION
- SILT FENCE
- ROCK CHECK DAM
- RIPRAP
- CONSTRUCTION LIMITS



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REVISIONS			
NO.	DATE	DESCRIPTION	BY



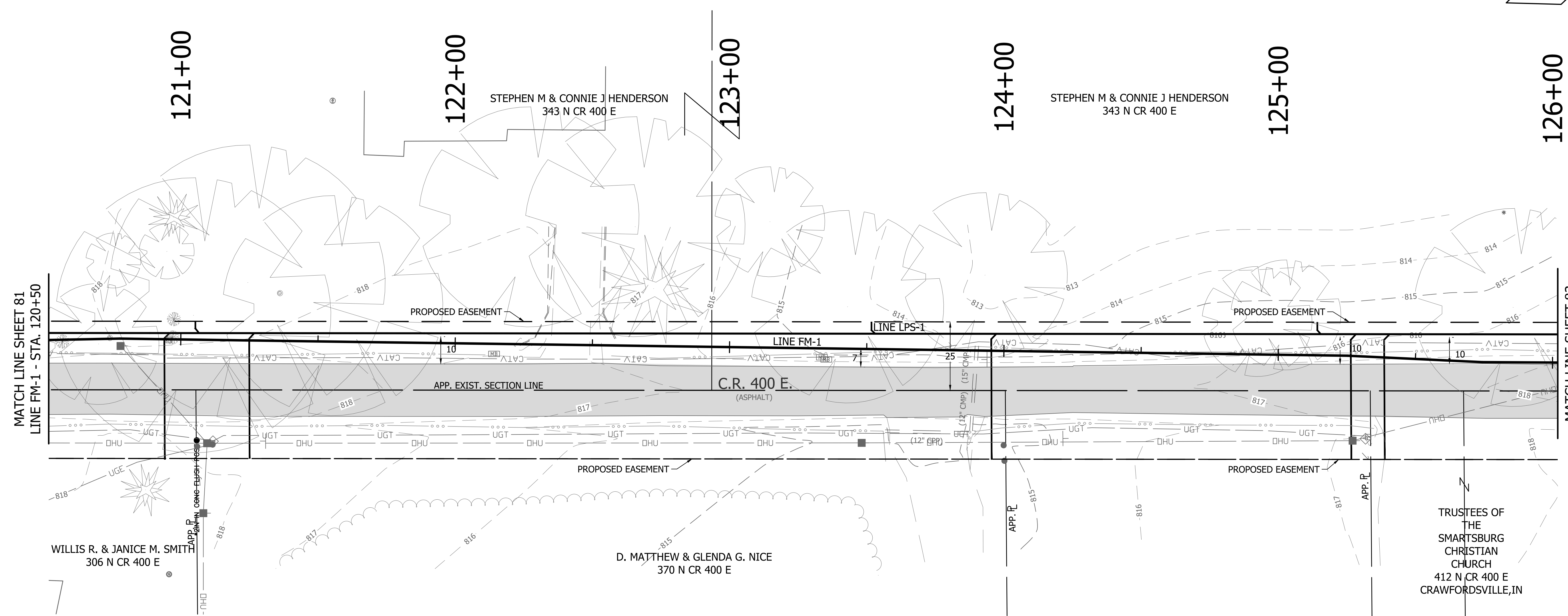
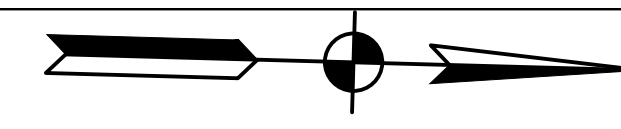
RECOMMENDED FOR APPROVAL		06/07/18
DESIGNED: KDK	DRAWN: KDK	DATE
CHECKED: SJW	CHECKED: SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

**FORCE MAIN - LINE FM-1
EROSION CONTROL PLAN**

HORIZONTAL SCALE	
1" = 20'	
VERTICAL SCALE	
1" = 5'	
SHEETS	
81	of 126
PROJECT	
15-3371	

DIRECTORY: F:\2015\15-3371_SR32_Collection System and Septage Receiving Station\DESIGN\Drawings\3-Erosion Control
 FILE: EC LINE FM-1-3.dwg
 DIMSCALE: 1" = 5'
 PLOTTED BY: jmovery
 DATE: Jun 06, 2018 - 6:56pm



MATCH LINE SHEET 81
LINE FM-1 - STA. 120+50

MATCH LINE SHEET 83
LINE FM-1 - STA. 126+50

WILLIS R. & JANICE M. SMITH
306 N CR 400 E

STEPHEN M & CONNIE J HENDERSON
343 N CR 400 E

STEPHEN M & CONNIE J HENDERSON
343 N CR 400 E

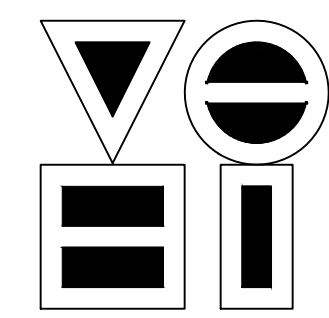
D. MATTHEW & GLENDA G. NICE
370 N CR 400 E

TRUSTEES OF
THE
SMARTSBURG
CHRISTIAN
CHURCH
412 N CR 400 E
CRAWFORDSVILLE, IN

LEGEND

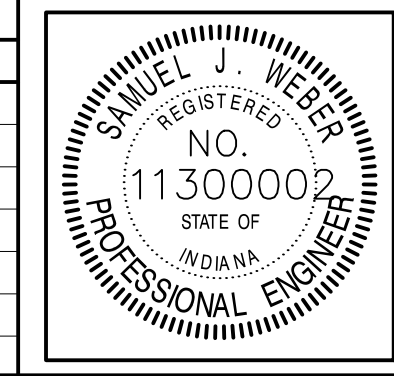
- TEMPORARY CONSTRUCTION ENTRANCE
- SEEDING
- EROSION CONTROL BLANKET
- GRAVEL DONUT INLET PROTECTION
- SILT FENCE
- ROCK CHECK DAM
- RIPRAP
- CONSTRUCTION LIMITS

DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\3-Erosion Control\
 FILE: EC LINE FM-1-3.dwg
 DIMSCALE: 1"=20'
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:56pm



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 vse@vsengineering.com www.vsengineering.com
 Phone: (317) 293-3542 Fax: (317) 293-4737

REVISIONS			
NO.	DATE	DESCRIPTION	BY

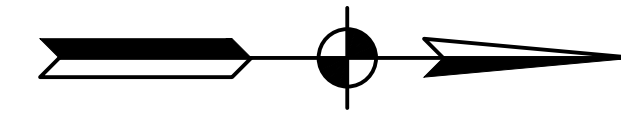
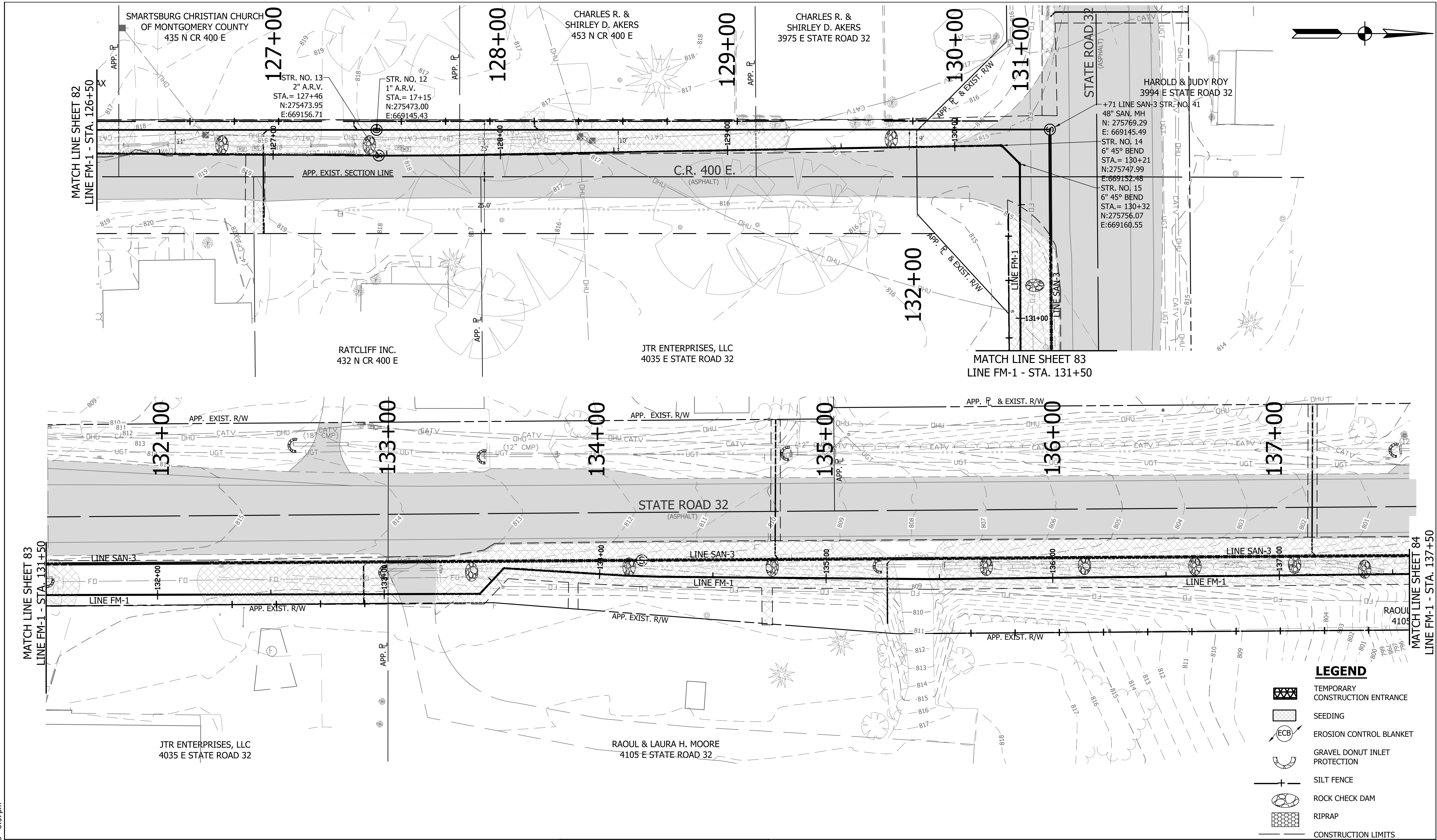


RECOMMENDED FOR APPROVAL		06/07/18
DESIGNED: KDK	DRAWN: KDK	DATE
CHECKED: SJW	CHECKED: SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
FORCE MAIN - LINE FM-1
EROSION CONTROL PLAN

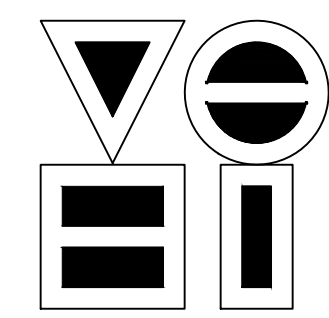
HORIZONTAL SCALE	
1" = 20'	
VERTICAL SCALE	
1" = 5'	
SHEETS	
82	of 126
PROJECT	
15-3371	

DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\3-Erosion Control\
 FILE: EC LINE FM-1-4.dwg
 DIMSCALE: 1/8" = 1' LTSCALE: 20
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:57pm



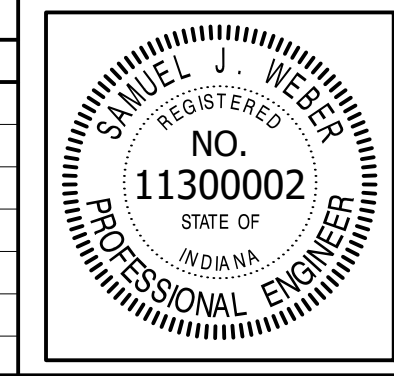
LEGEND

- TEMPORARY CONSTRUCTION ENTRANCE
- SEEDING
- EROSION CONTROL BLANKET
- GRAVEL DONUT INLET PROTECTION
- SILT FENCE
- ROCK CHECK DAM
- RIPRAP
- CONSTRUCTION LIMITS



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 vse@vsengineering.com www.vsengineering.com
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REVISIONS			
NO.	DATE	DESCRIPTION	BY



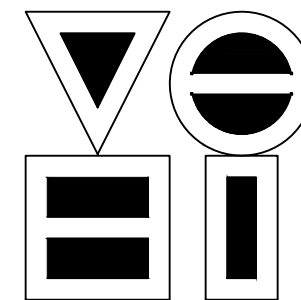
RECOMMENDED FOR APPROVAL		06/07/18
DESIGNED: KDK	DRAWN: KDK	DATE
CHECKED: SJW	CHECKED: SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

FORCE MAIN - LINE FM-1 EROSION CONTROL PLAN

HORIZONTAL SCALE	
1" = 20'	
VERTICAL SCALE	
1" = 5'	
SHEETS	
83	of 126
PROJECT	
15-3371	

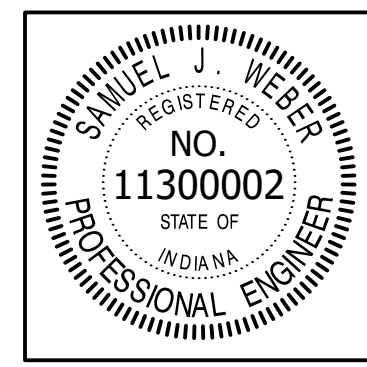
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 FILE: EC LINE FM1-4.dwg
 DIMSCALE: 1/4" = 1' LTSCALE: 20
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:57pm



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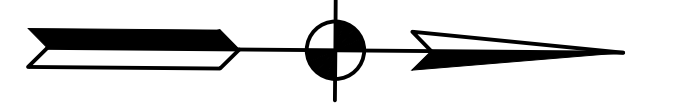
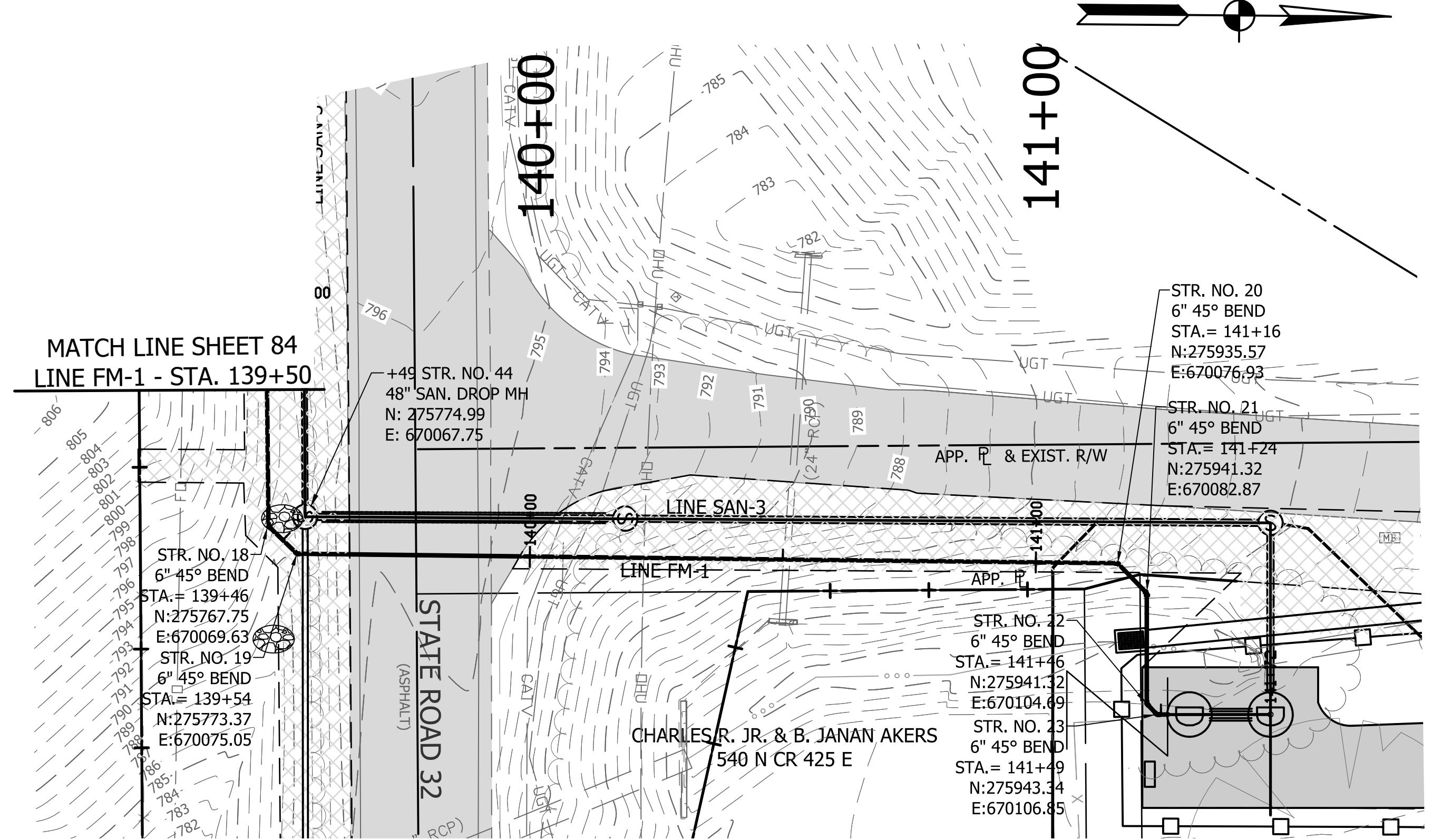
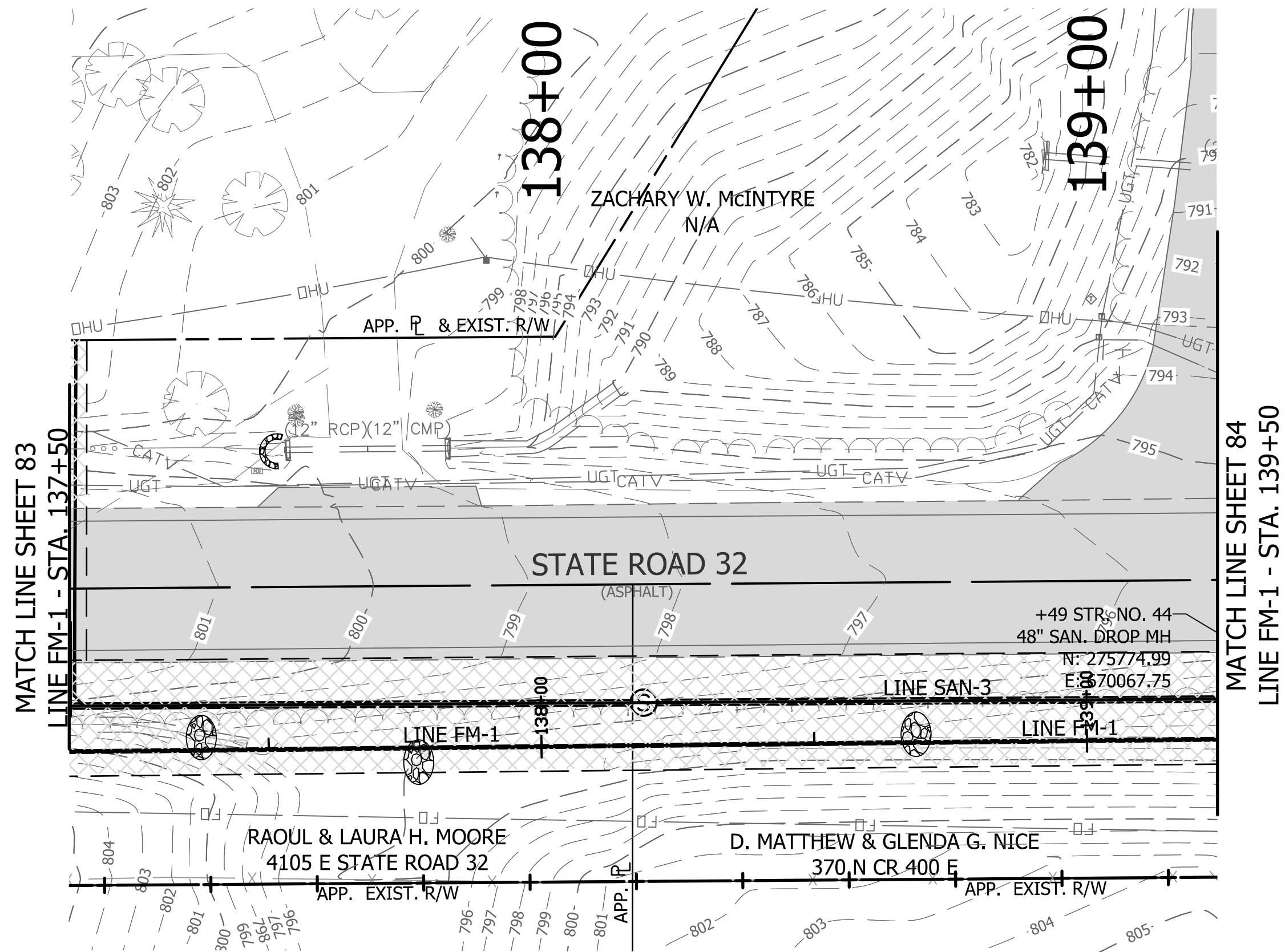
RECOMMENDED FOR APPROVAL		06/07/18
DESIGNED:	KDK	DRAWN:
CHECKED:	SJW	CHECKED:

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM	
FORCE MAIN - LINE FM-1 EROSION CONTROL PLAN	

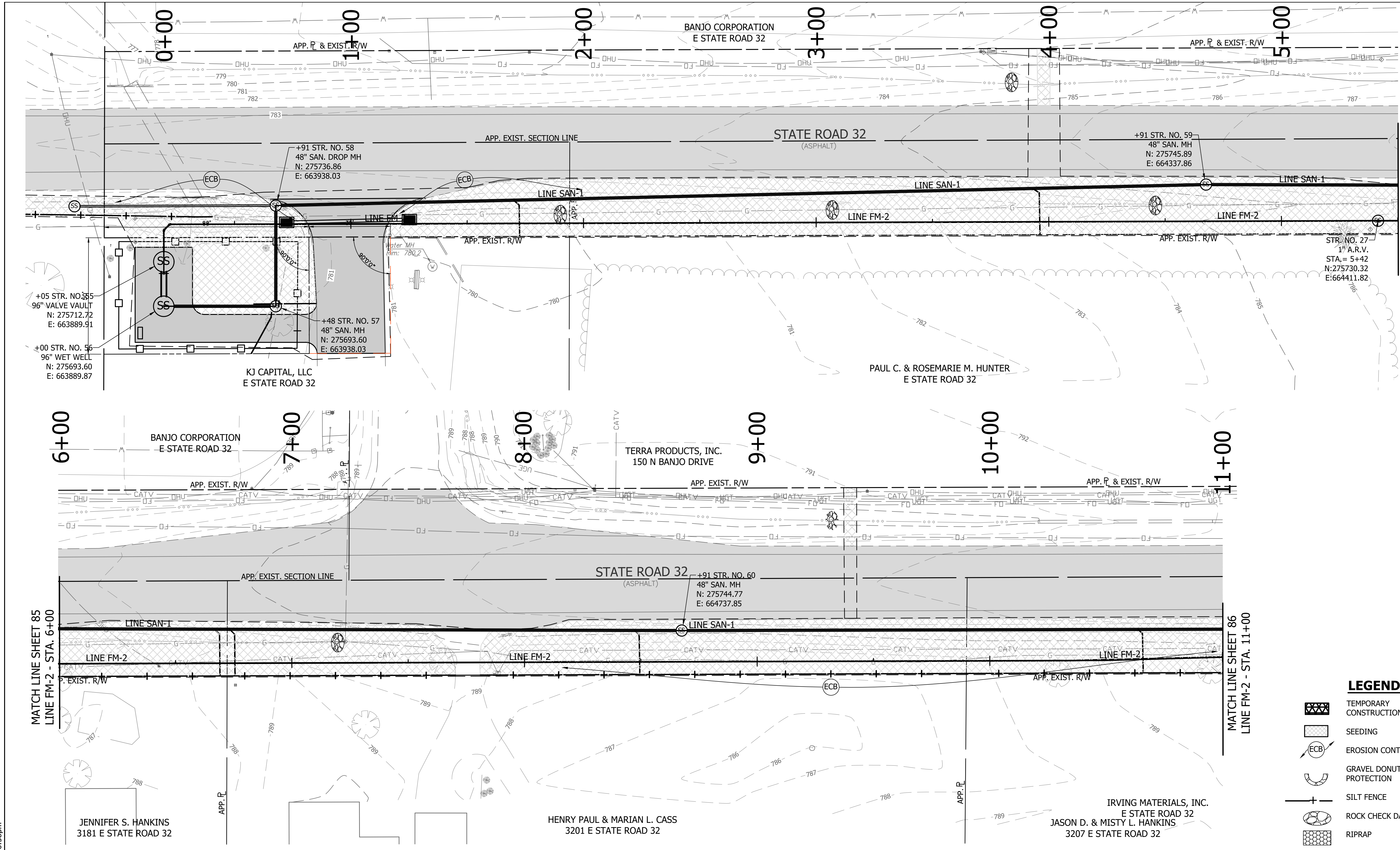
HORIZONTAL SCALE	
1" = 20'	
VERTICAL SCALE	
1" = 5'	
SHEETS	
84	of 126
PROJECT	
15-3371	

LEGEND

- TEMPORARY CONSTRUCTION ENTRANCE
- SEEDING
- EROSION CONTROL BLANKET
- GRAVEL DONUT INLET PROTECTION
- SILT FENCE
- ROCK CHECK DAM
- RIPRAP
- CONSTRUCTION LIMITS



DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\3-Erosion Control
 FILE: EC LINE FM-2-1.dwg
 DIMSCALE: 1/8" = 1' LTSCALE: 20
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:58pm



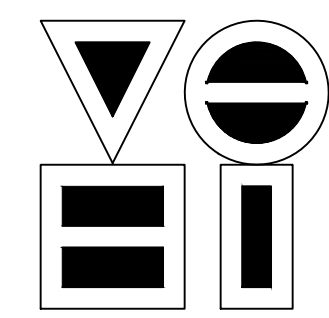
MATCH LINE SHEET 85
 LINE FM-2 - STA. 6+00

MATCH LINE SHEET 85
 LINE FM-2 - STA. 6+00

MATCH LINE SHEET 86
 LINE FM-2 - STA. 11+00

LEGEND

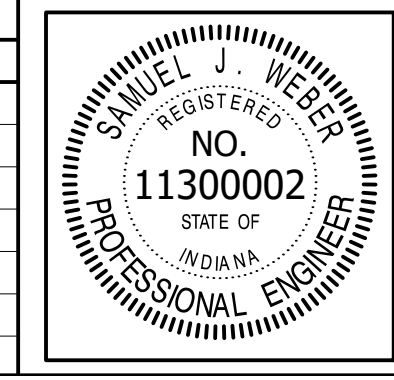
- TEMPORARY CONSTRUCTION ENTRANCE
- SEEDING
- EROSION CONTROL BLANKET
- GRAVEL DONUT INLET PROTECTION
- SILT FENCE
- ROCK CHECK DAM
- RIPRAP
- CONSTRUCTION LIMITS



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REVISIONS			
NO.	DATE	DESCRIPTION	BY

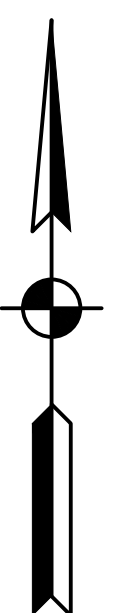
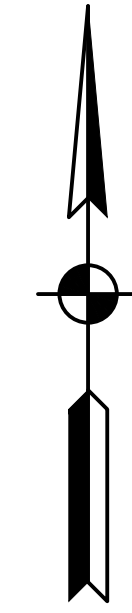
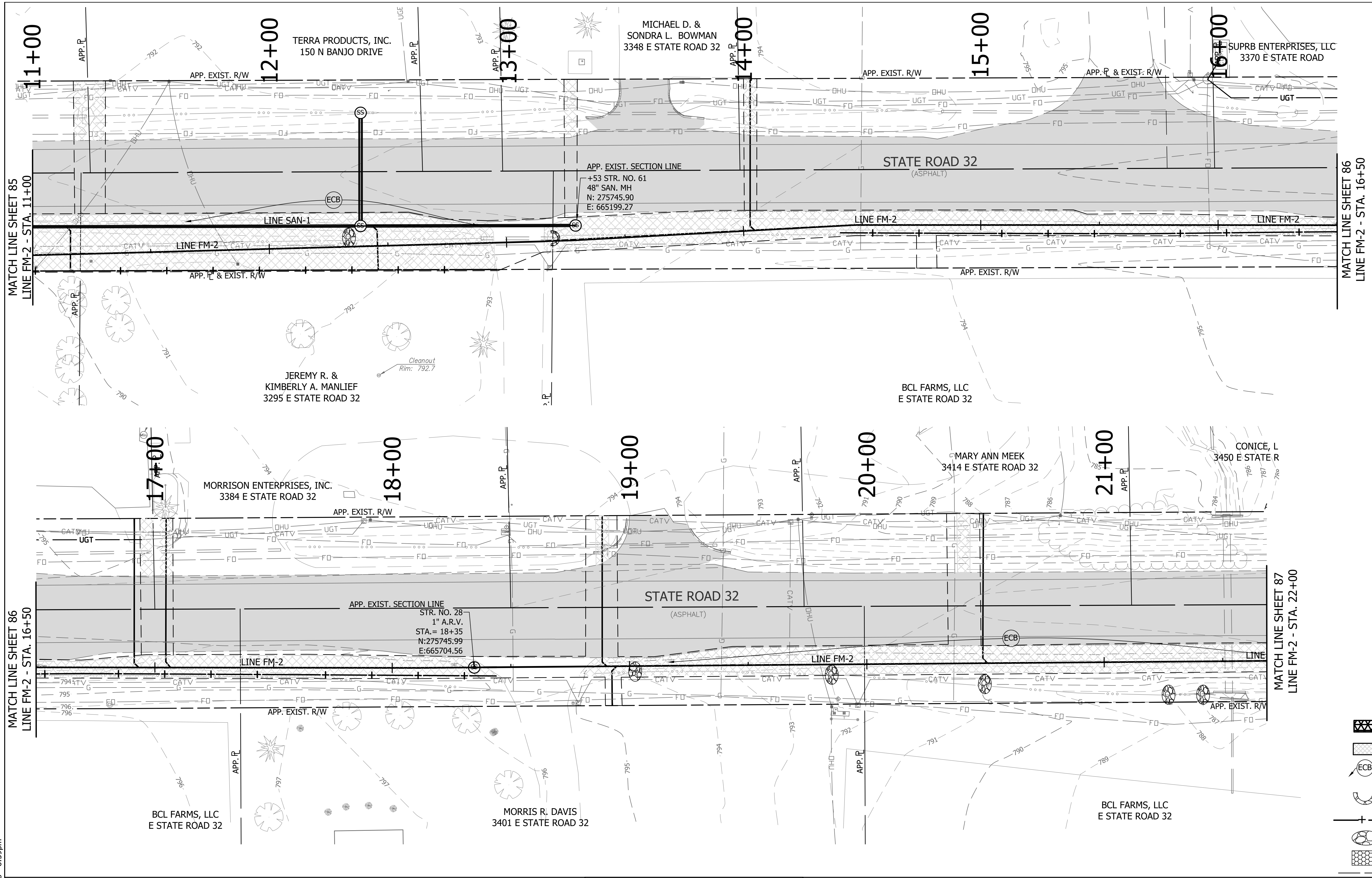


RECOMMENDED FOR APPROVAL		06/07/18
DESIGNED:	KDK	DRAWN:
CHECKED:	SJW	CHECKED:

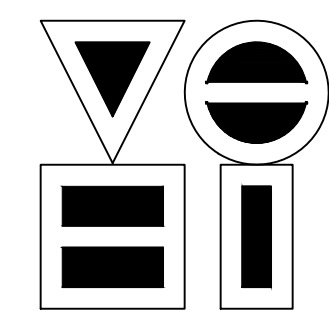
S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
FORCE MAIN - LINE FM-2
EROSION CONTROL PLAN

HORIZONTAL SCALE	
1" = 20'	
VERTICAL SCALE	
1" = 5'	
SHEETS	
85	of 126
PROJECT	
15-3371	

DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\3-Erosion Control
 FILE: EC LINE FM-2-1.dwg
 DIMSCALE: 1/8" = 1' LTSCALE: 20
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:59pm



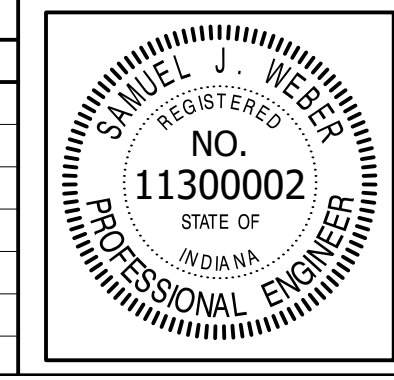
- LEGEND**
- TEMPORARY CONSTRUCTION ENTRANCE
 - SEEDING
 - EROSION CONTROL BLANKET
 - GRAVEL DONUT INLET PROTECTION
 - SILT FENCE
 - ROCK CHECK DAM
 - RIPRAP
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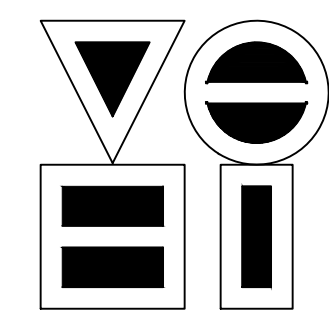
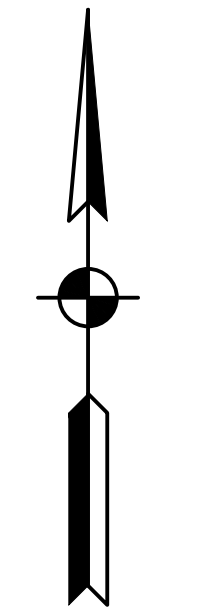
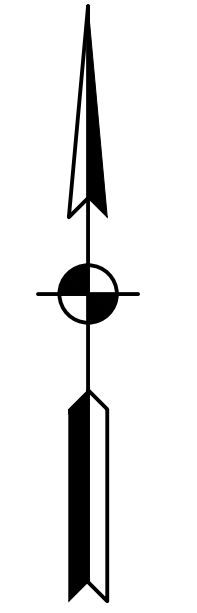
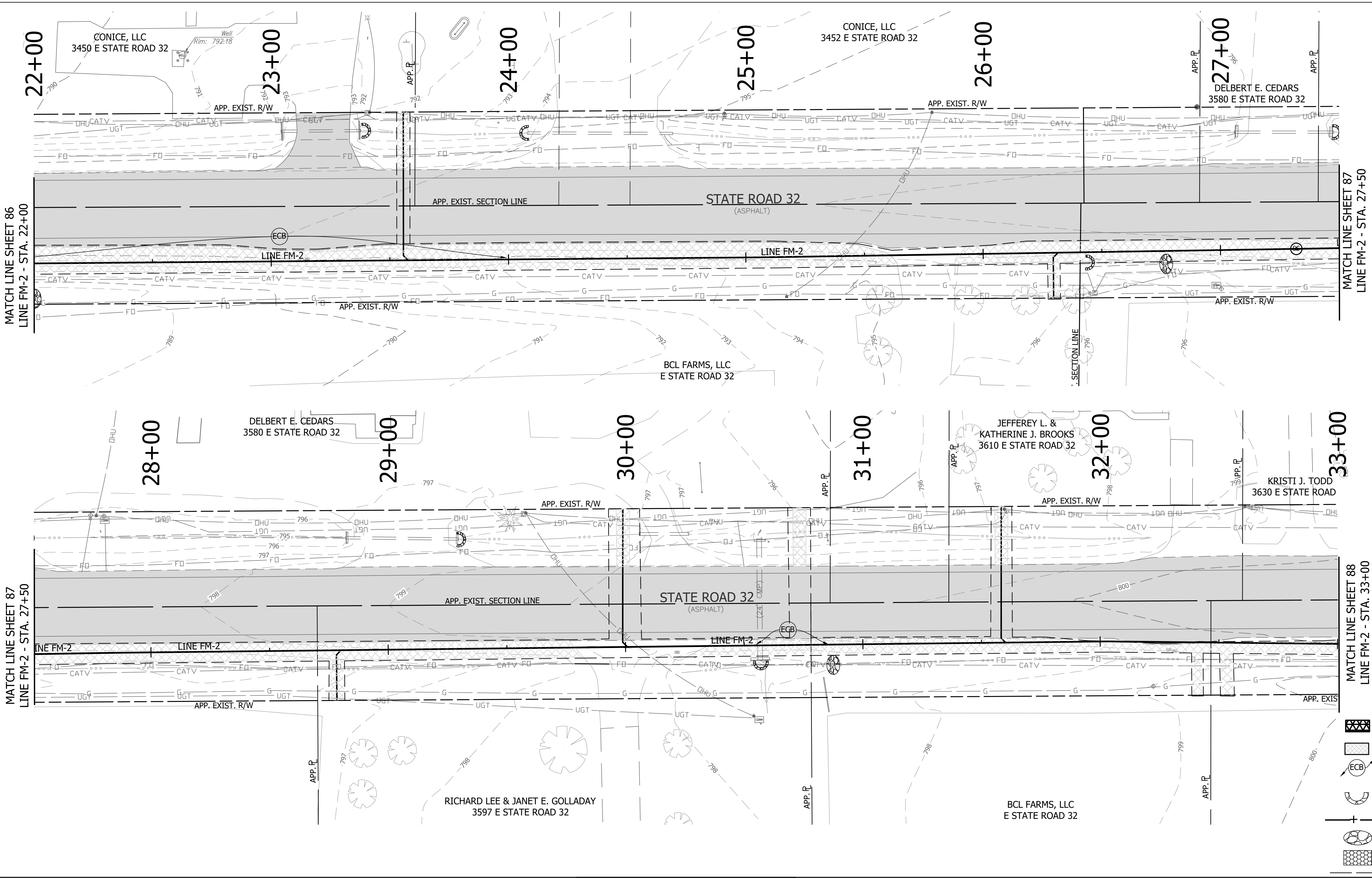
RECOMMENDED FOR APPROVAL		06/07/18
DESIGNED: KDK	DRAWN: KDK	DATE
CHECKED: SJW	CHECKED: SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

**FORCE MAIN - LINE FM-2
 EROSION CONTROL PLAN**

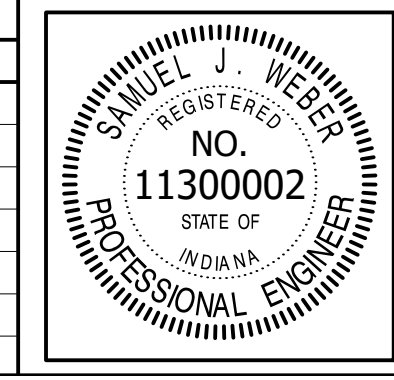
HORIZONTAL SCALE	
1" = 20'	
VERTICAL SCALE	
1" = 5'	
SHEETS	
86	of 126
PROJECT	
15-3371	

DIRECTORY: F:\2015\15-3371_SR32_Collection System and Septage Receiving Station\DESIGN\Drawings\3-Erosion Control
 FILE: EC LINE FM-2-1.dwg
 DIMSCALE: 1/16"=1' LTSCALE: 20
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:59pm



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REVISIONS			
NO.	DATE	DESCRIPTION	BY



RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED:	KDK	DRAWN:
CHECKED:	SJW	CHECKED:

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

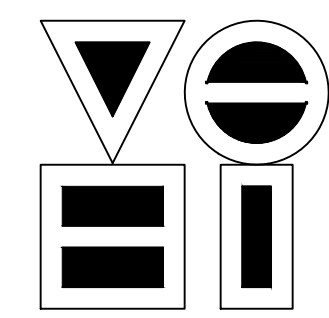
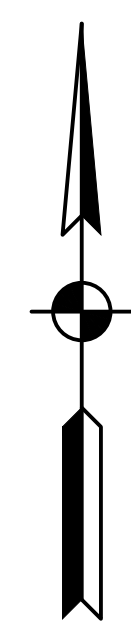
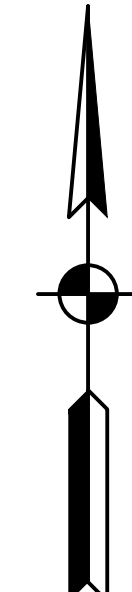
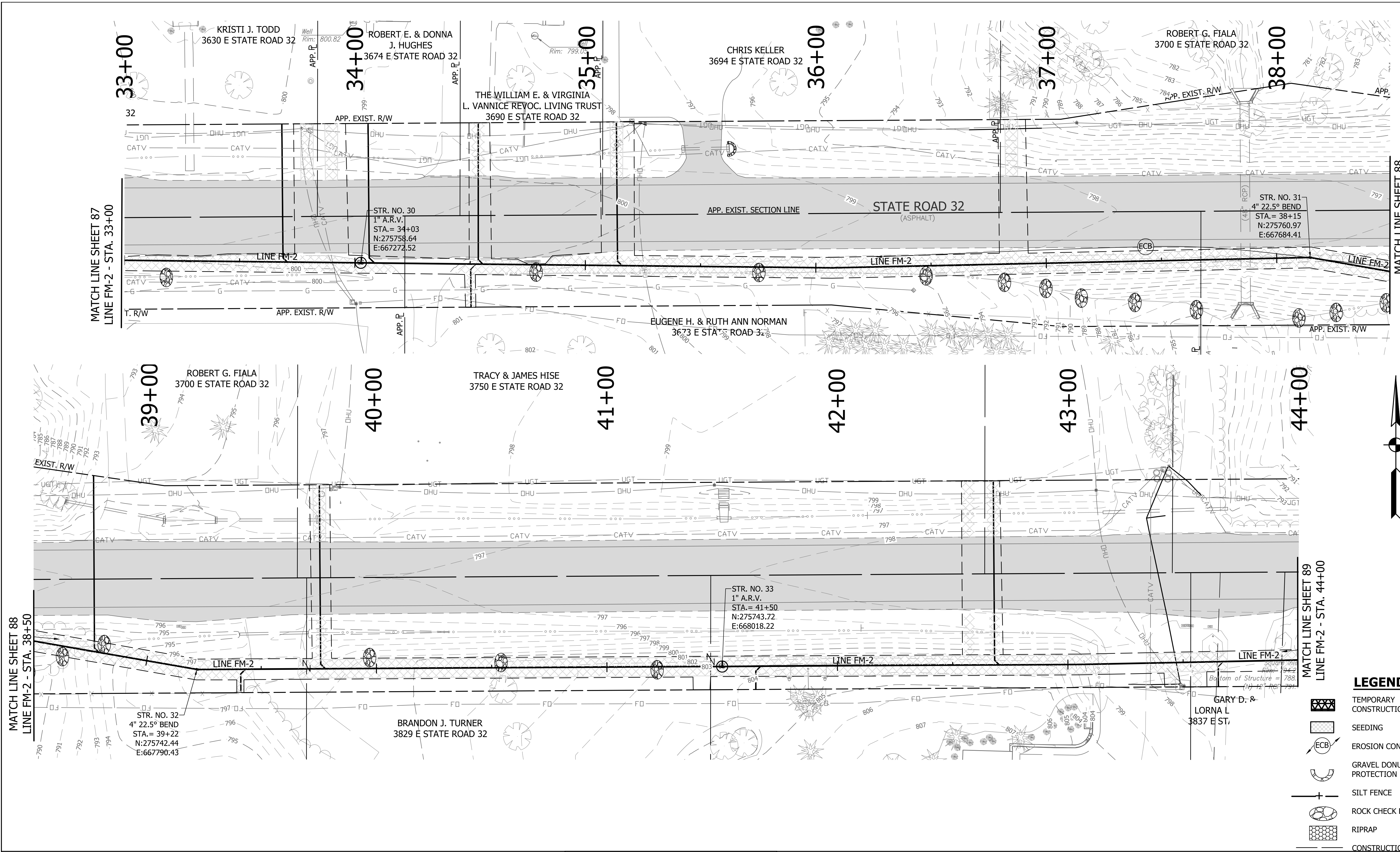
FORCE MAIN - LINE FM-2

EROSION CONTROL PLAN

- LEGEND**
- TEMPORARY CONSTRUCTION ENTRANCE
 - SEEDING
 - EROSION CONTROL BLANKET
 - GRAVEL DONUT INLET PROTECTION
 - SILT FENCE
 - ROCK CHECK DAM
 - RIPRAP
 - CONSTRUCTION LIMITS

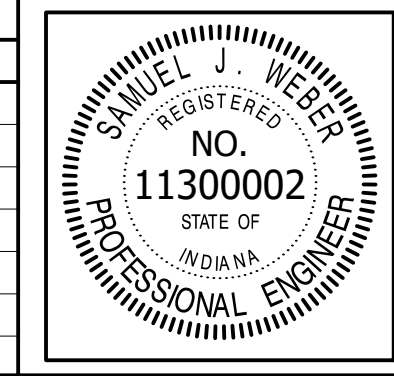
HORIZONTAL SCALE	
1" = 20'	
VERTICAL SCALE	
1" = 5'	
SHEETS	
87	of 126
PROJECT	
15-3371	

DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\3-Erosion Control
 FILE: EC LINE FM-2-1.dwg
 DIMSCALE: 1/8"=1'-0"
 PLOTTED BY: J.Mowery
 DATE: Jun 06, 2018 - 6:59pm



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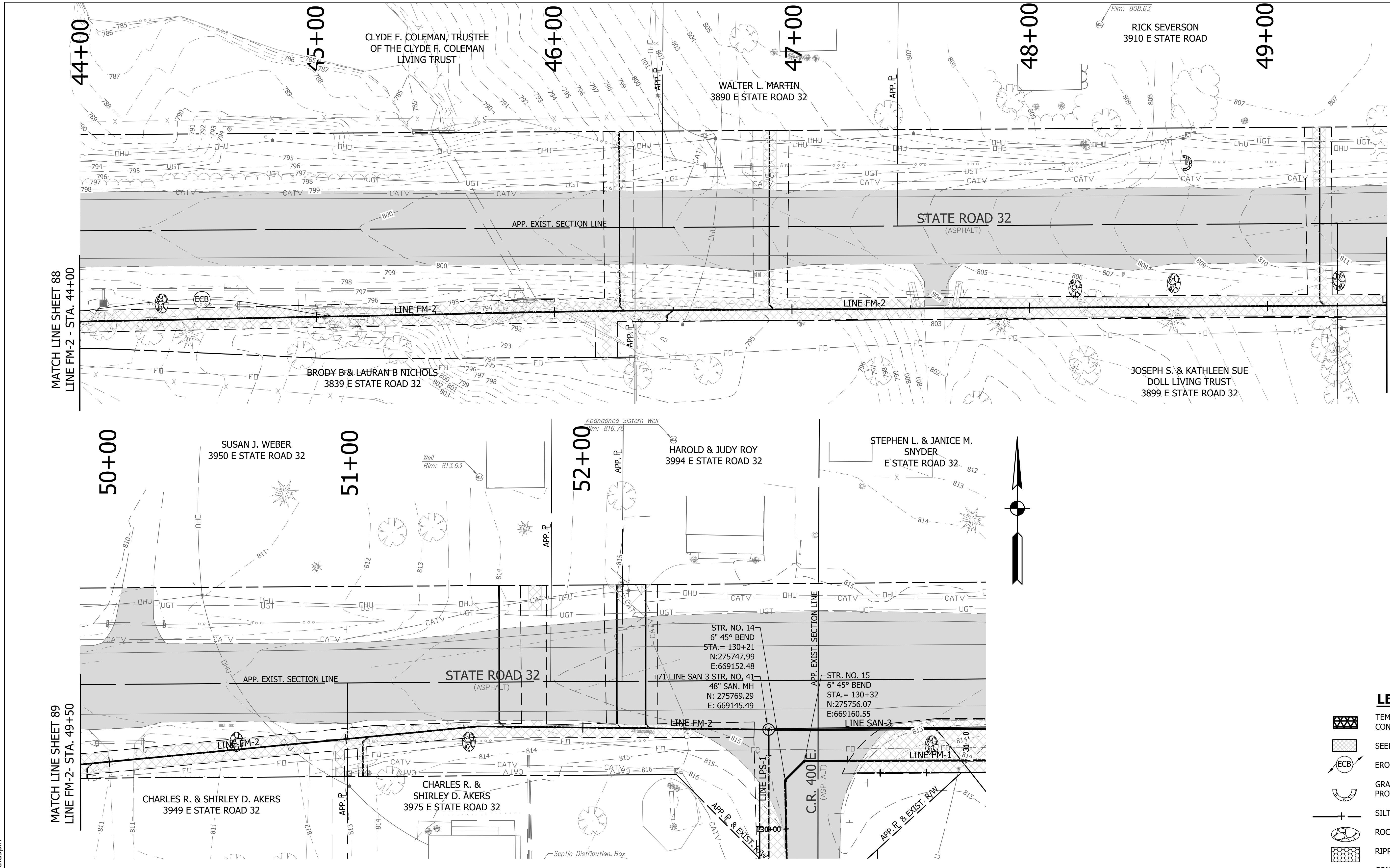
RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED: KDK	DRAWN: KDK	DATE
CHECKED: SJW	CHECKED: SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
FORCE MAIN - LINE FM-2
EROSION CONTROL PLAN

HORIZONTAL SCALE	
1" = 20'	
VERTICAL SCALE	
1" = 5'	
SHEETS	
88	of 126
PROJECT	
15-3371	

- LEGEND**
- TEMPORARY CONSTRUCTION ENTRANCE
 - SEEDING
 - EROSION CONTROL BLANKET
 - GRAVEL DONUT INLET PROTECTION
 - SILT FENCE
 - ROCK CHECK DAM
 - RIPRAP
 - CONSTRUCTION LIMITS

DIRECTORY: F:\2015\15-3371_SR32_Collection System and Septage Receiving Station\DESIGN\Drawings\3-Erosion Control\FILE: EC LINE FM-2-1.dwg
 DIMSCALE: 1/4" = 1' LTSCALE: 20
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 6:59pm

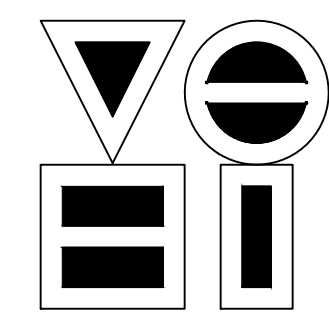


MATCH LINE SHEET 88
LINE FM-2 - STA. 44+00

MATCH LINE SHEET 89
LINE FM-2 - STA. 49+50

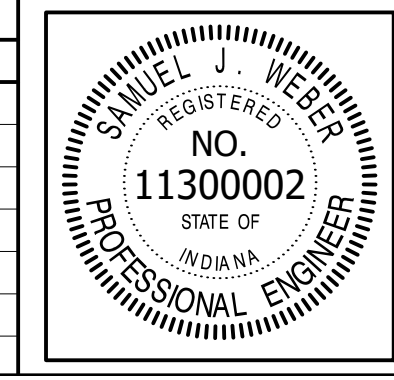
MATCH LINE SHEET 89
LINE FM-2 - STA. 49+50

- LEGEND**
- TEMPORARY CONSTRUCTION ENTRANCE
 - SEEDING
 - EROSION CONTROL BLANKET
 - GRAVEL DONUT INLET PROTECTION
 - SILT FENCE
 - ROCK CHECK DAM
 - RIPRAP
 - CONSTRUCTION LIMITS



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REVISIONS			
NO.	DATE	DESCRIPTION	BY



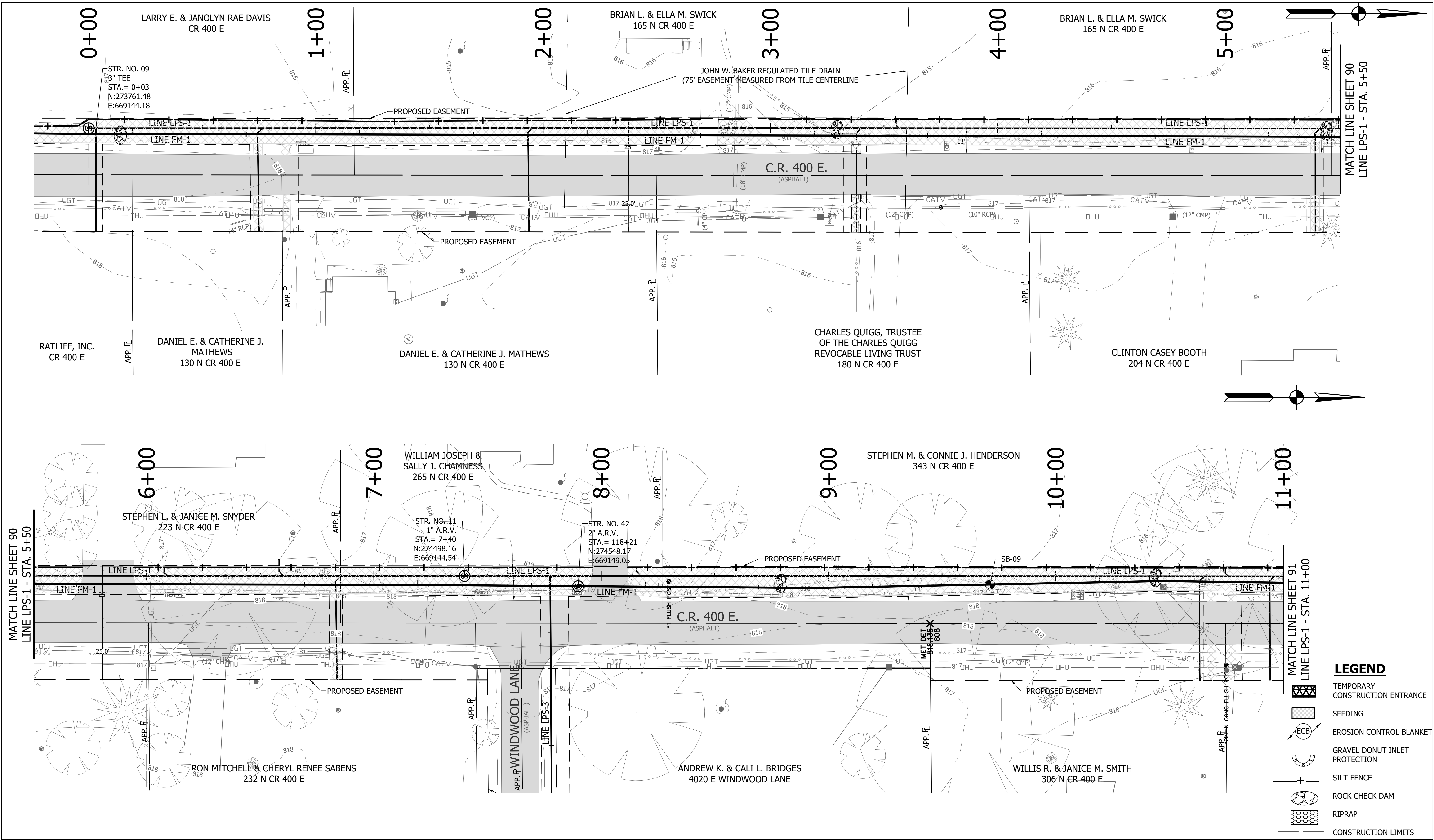
RECOMMENDED FOR APPROVAL		06/07/18
DESIGNED: KDK	DRAWN: KDK	DATE
CHECKED: SJW	CHECKED: SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

**FORCE MAIN - LINE FM-2
EROSION CONTROL PLAN**

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	89 of 126
PROJECT	15-3371

DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\3-Erosion Control\FILE: EC LINE LPS-1.dwg
 DIMSCALE: 1"=50'
 PLOTTED BY: J.Mowery
 DATE: Jun 06, 2018 - 7:00pm



MATCH LINE SHEET 90
 LINE LPS-1 - STA. 5+50

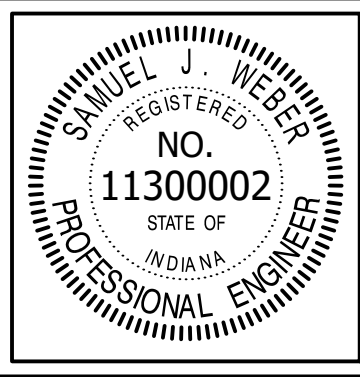
MATCH LINE SHEET 91
 LINE LPS-1 - STA. 11+00

- LEGEND**
- TEMPORARY CONSTRUCTION ENTRANCE
 - SEEDING
 - EROSION CONTROL BLANKET
 - GRAVEL DONUT INLET PROTECTION
 - SILT FENCE
 - ROCK CHECK DAM
 - RIPRAP
 - CONSTRUCTION LIMITS



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REVISIONS			
NO.	DATE	DESCRIPTION	BY

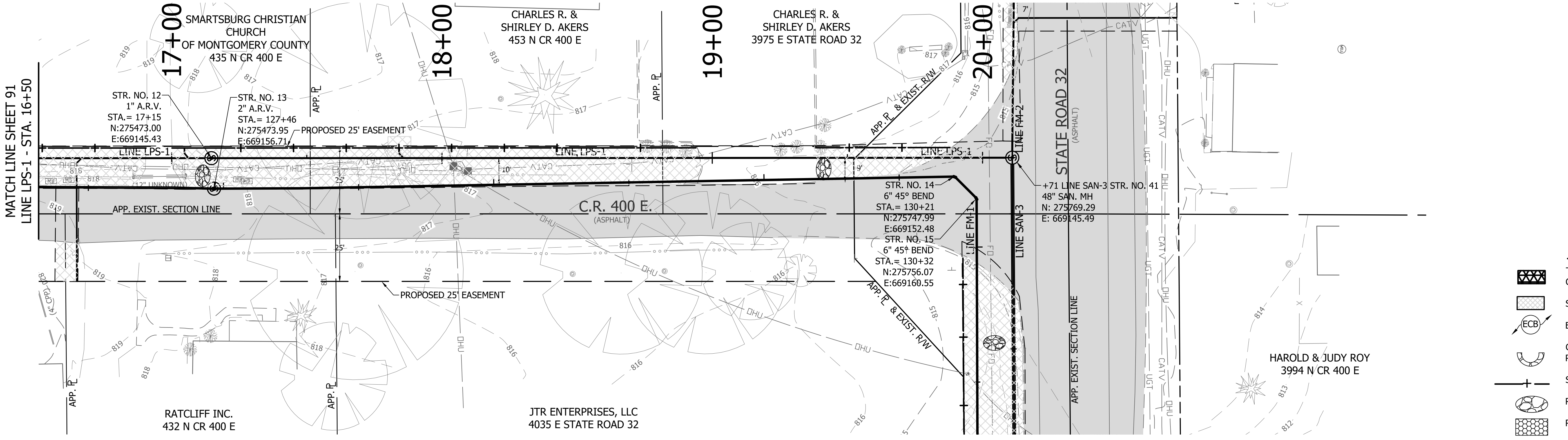
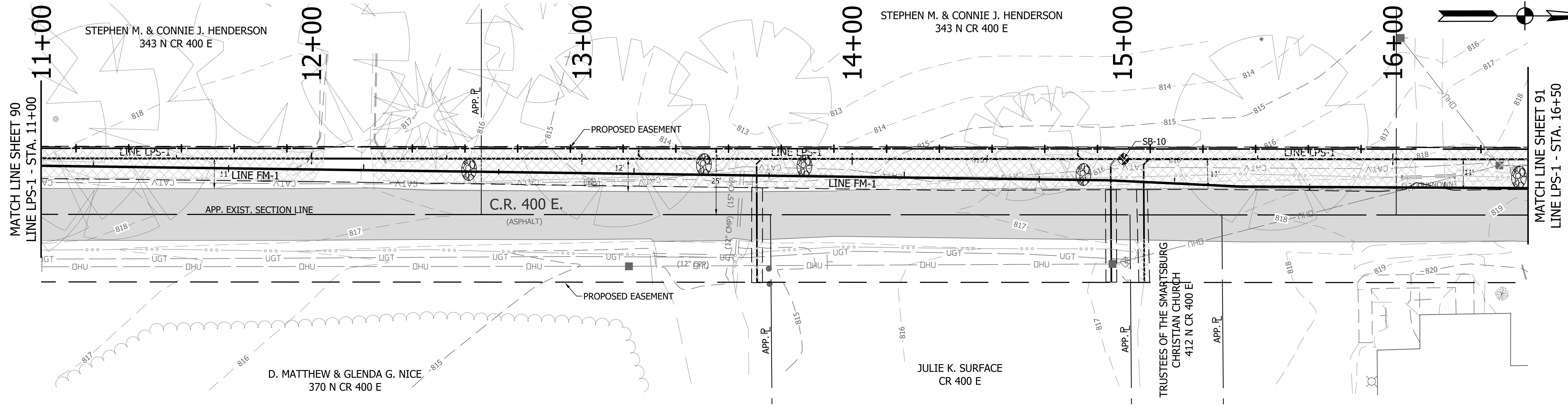


RECOMMENDED FOR APPROVAL		06/07/18
DESIGNED: KDK	DRAWN: KDK	DATE
CHECKED: SJW	CHECKED: SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
FORCE MAIN - LINE LPS-1
EROSION CONTROL PLAN

HORIZONTAL SCALE	
1" = 20'	
VERTICAL SCALE	
1" = 5'	
SHEETS	
90 of 126	
PROJECT	
15-3371	

DIRECTORY: F:\2015\15-3371_SR32_Collection System and Septage Receiving Station\DESIGN\Drawings\3-Erosion Control\FILE: EC LINE LPS-1.dwg
 DIMSCALE: 1"=20'
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 7:01pm



LEGEND

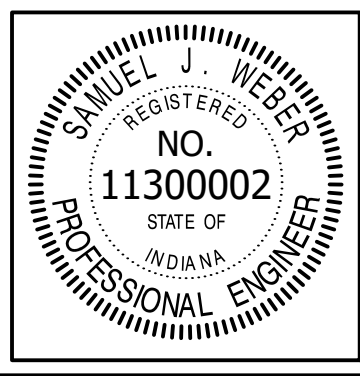
- TEMPORARY CONSTRUCTION ENTRANCE
- SEEDING
- EROSION CONTROL BLANKET
- GRAVEL DONUT INLET PROTECTION
- SILT FENCE
- ROCK CHECK DAM
- RIPRAP
- CONSTRUCTION LIMITS



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REVISIONS			
NO.	DATE	DESCRIPTION	BY

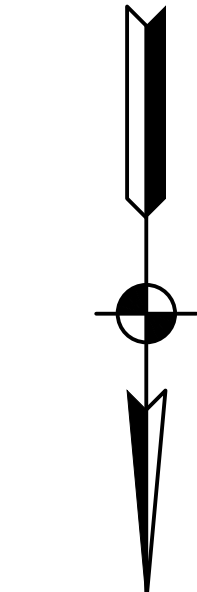
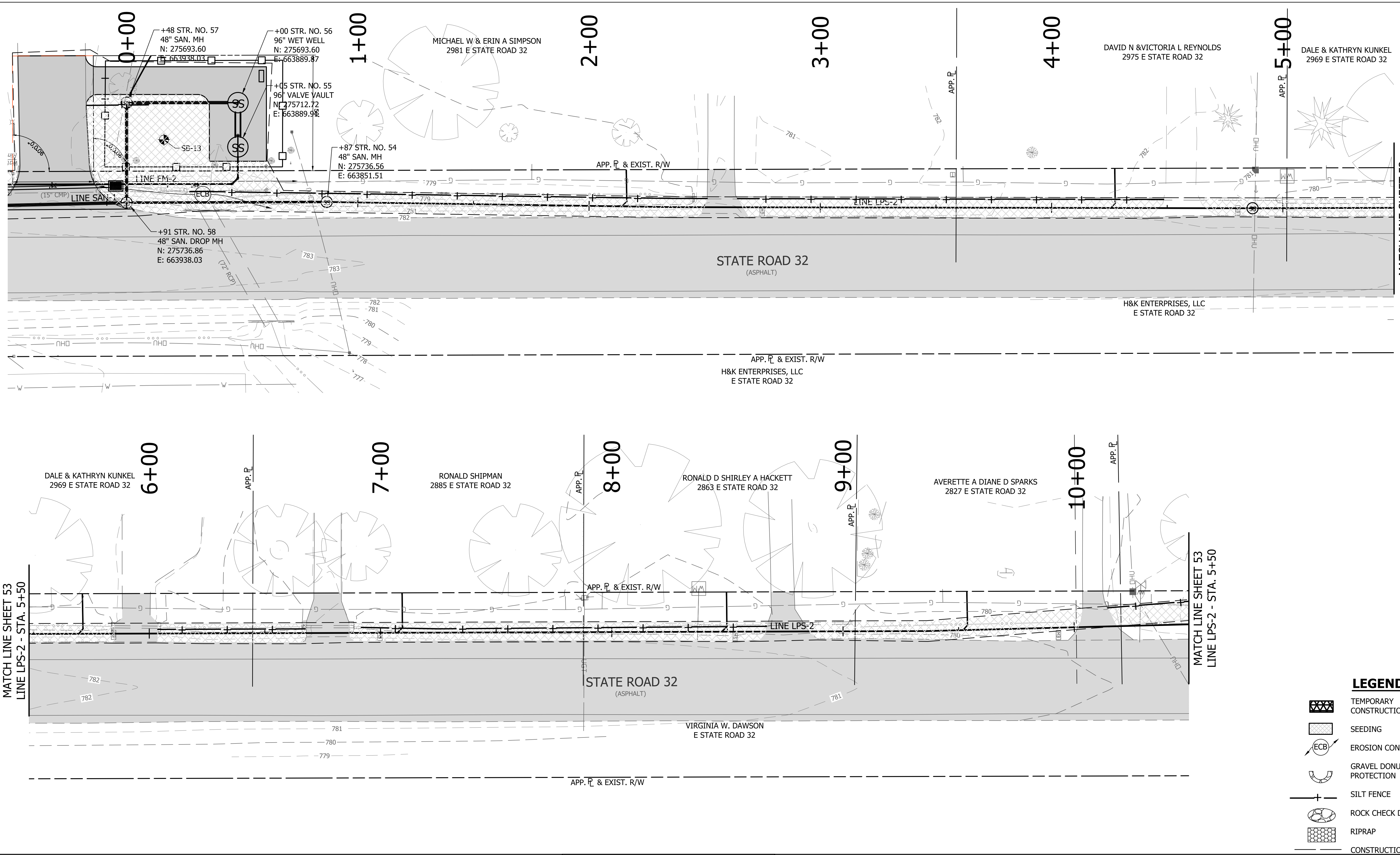


RECOMMENDED FOR APPROVAL		06/07/18
DESIGNED: KDK	DRAWN: KDK	DATE
CHECKED: SJW	CHECKED: SJW	

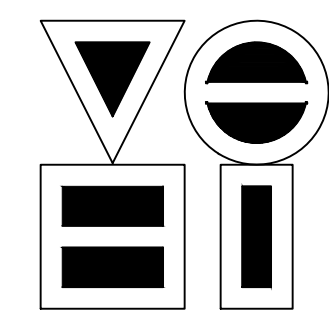
S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

**FORCE MAIN - LINE LPS-1
 EROSION CONTROL PLAN**

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	91 of 126
PROJECT	15-3371



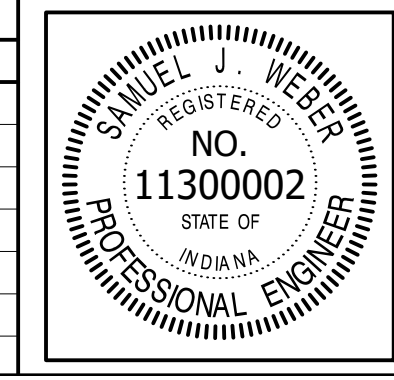
- LEGEND**
- TEMPORARY CONSTRUCTION ENTRANCE
 - SEEDING
 - EROSION CONTROL BLANKET
 - GRAVEL DONUT INLET PROTECTION
 - SILT FENCE
 - ROCK CHECK DAM
 - RIPRAP
 - CONSTRUCTION LIMITS



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REVISIONS			
NO.	DATE	DESCRIPTION	BY



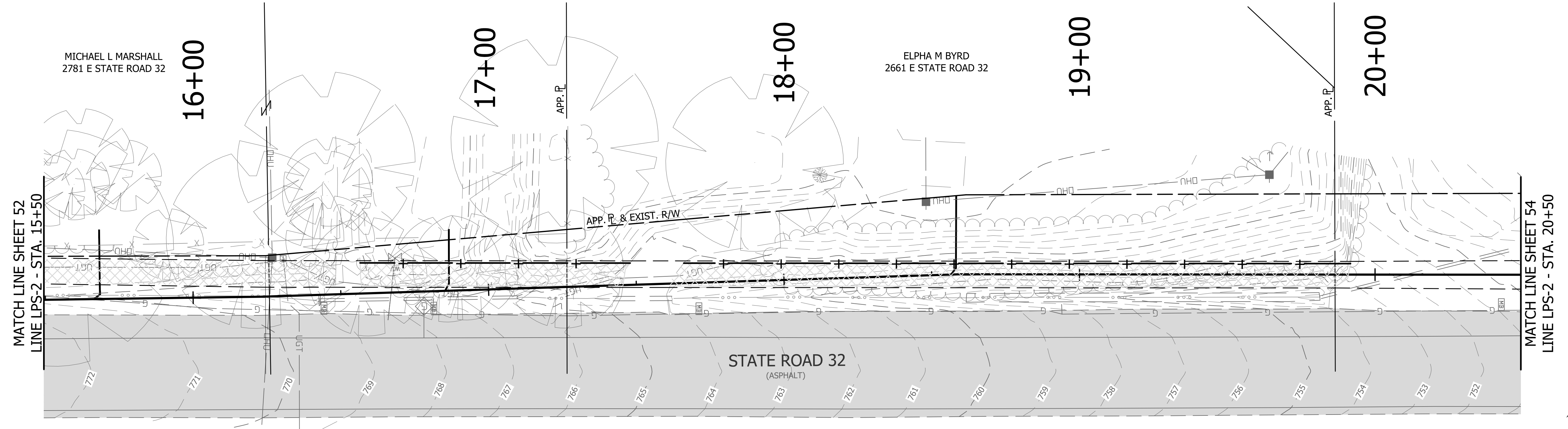
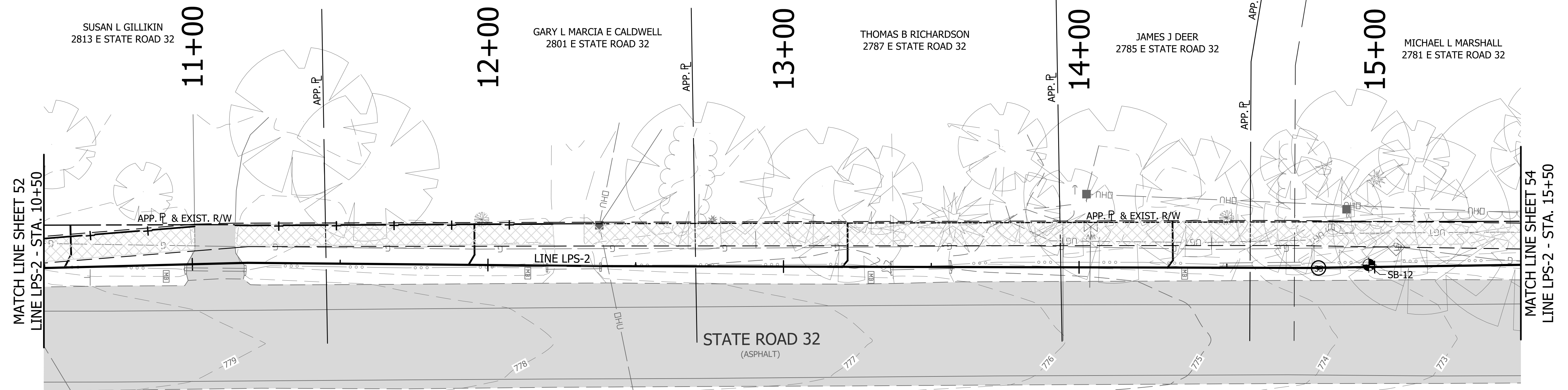
RECOMMENDED FOR APPROVAL		06/07/18
DESIGNED:	KDK	DRAWN:
CHECKED:	SJW	CHECKED:

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

FORCE MAIN - LINE LPS-2
EROSION CONTROL PLAN

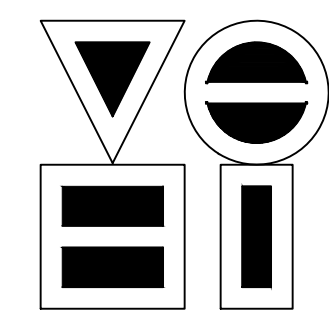
HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	92 of 126
PROJECT	15-3371

DIRECTORY: F:\2015\15-3371_SR32_Collection System and Septage Receiving Station\DESIGN\Drawings\3-Erosion Control\
 FILE: EC LINE LPS-2.dwg
 DIMSCALE: 1/16" = 1' LTSCALE: 20
 PLOTTED BY: J.Mowery
 DATE: Jun 06, 2018 - 7:02pm



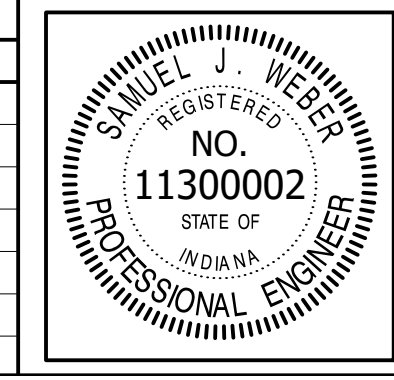
- LEGEND**
- TEMPORARY CONSTRUCTION ENTRANCE
 - SEEDING
 - EROSION CONTROL BLANKET
 - GRAVEL DONUT INLET PROTECTION
 - SILT FENCE
 - ROCK CHECK DAM
 - RIPRAP
 - CONSTRUCTION LIMITS

DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\3-Erosion Control
 FILE: EC LINE LPS-2.dwg
 DIMSCALE: 1/4" = 1' LTSCALE: 20
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 7:02pm



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REVISIONS			
NO.	DATE	DESCRIPTION	BY

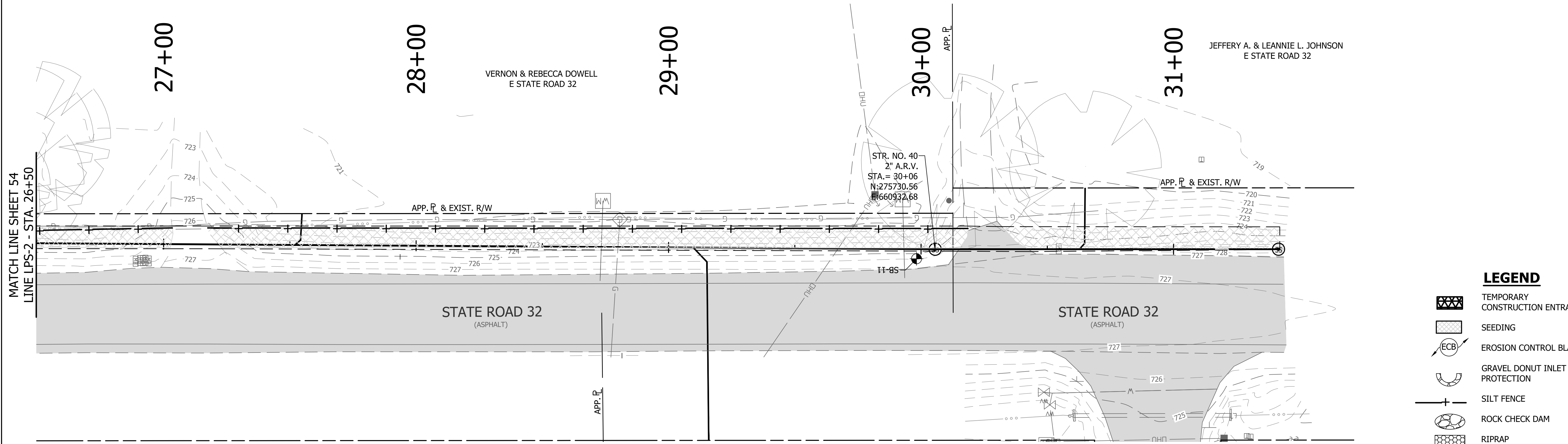
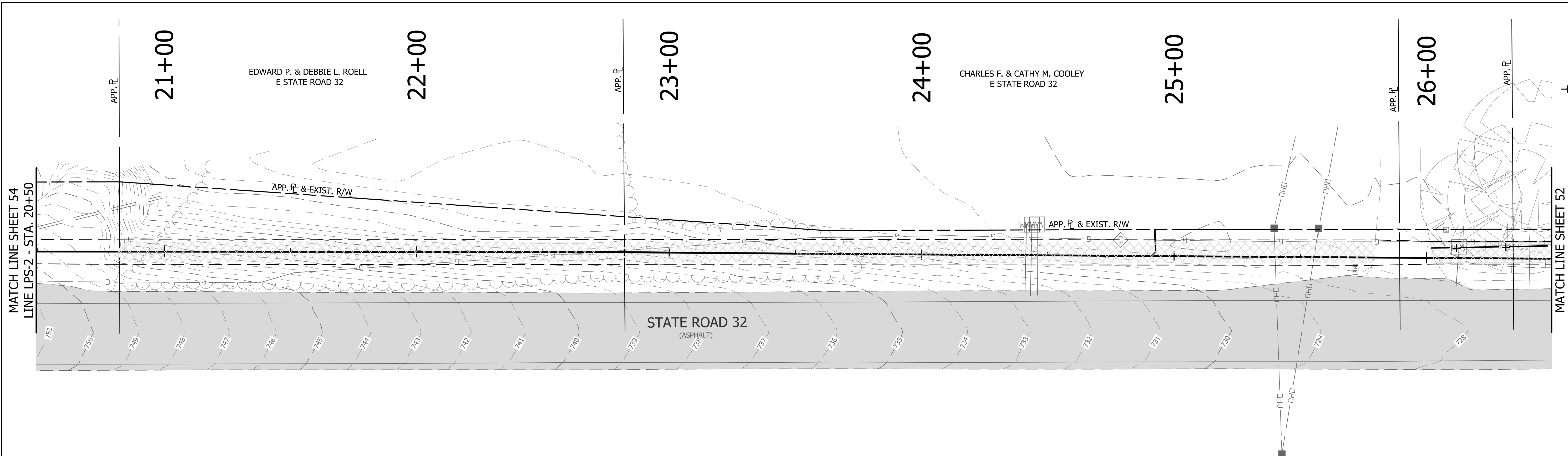


RECOMMENDED FOR APPROVAL		06/07/18
DESIGNED: KDK	DRAWN: KDK	DATE
CHECKED: SJW	CHECKED: SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

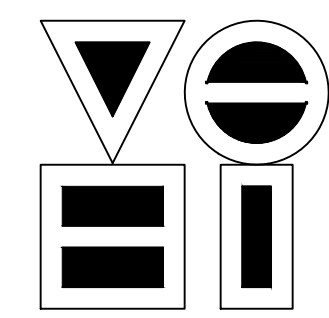
FORCE MAIN - LINE LPS-2 EROSION CONTROL PLAN

HORIZONTAL SCALE	
1" = 20'	
VERTICAL SCALE	
1" = 5'	
SHEETS	
93	of 126
PROJECT	
15-3371	



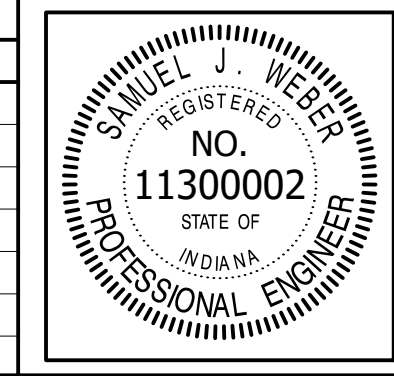
- LEGEND**
- TEMPORARY CONSTRUCTION ENTRANCE
 - SEEDING
 - EROSION CONTROL BLANKET
 - GRAVEL DONUT INLET PROTECTION
 - SILT FENCE
 - ROCK CHECK DAM
 - RIPRAP
 - CONSTRUCTION LIMITS

DIRECTORY: F:\2015\15-3371_SR32_Collection System and Septage Receiving Station\DESIGN\Drawings\3-Erosion Control\
 FILE: EC LINE LPS-2.dwg
 DIMSCALE: 1"=20'
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 7:02pm



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NO.	DATE	DESCRIPTION	BY



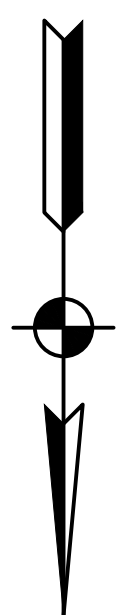
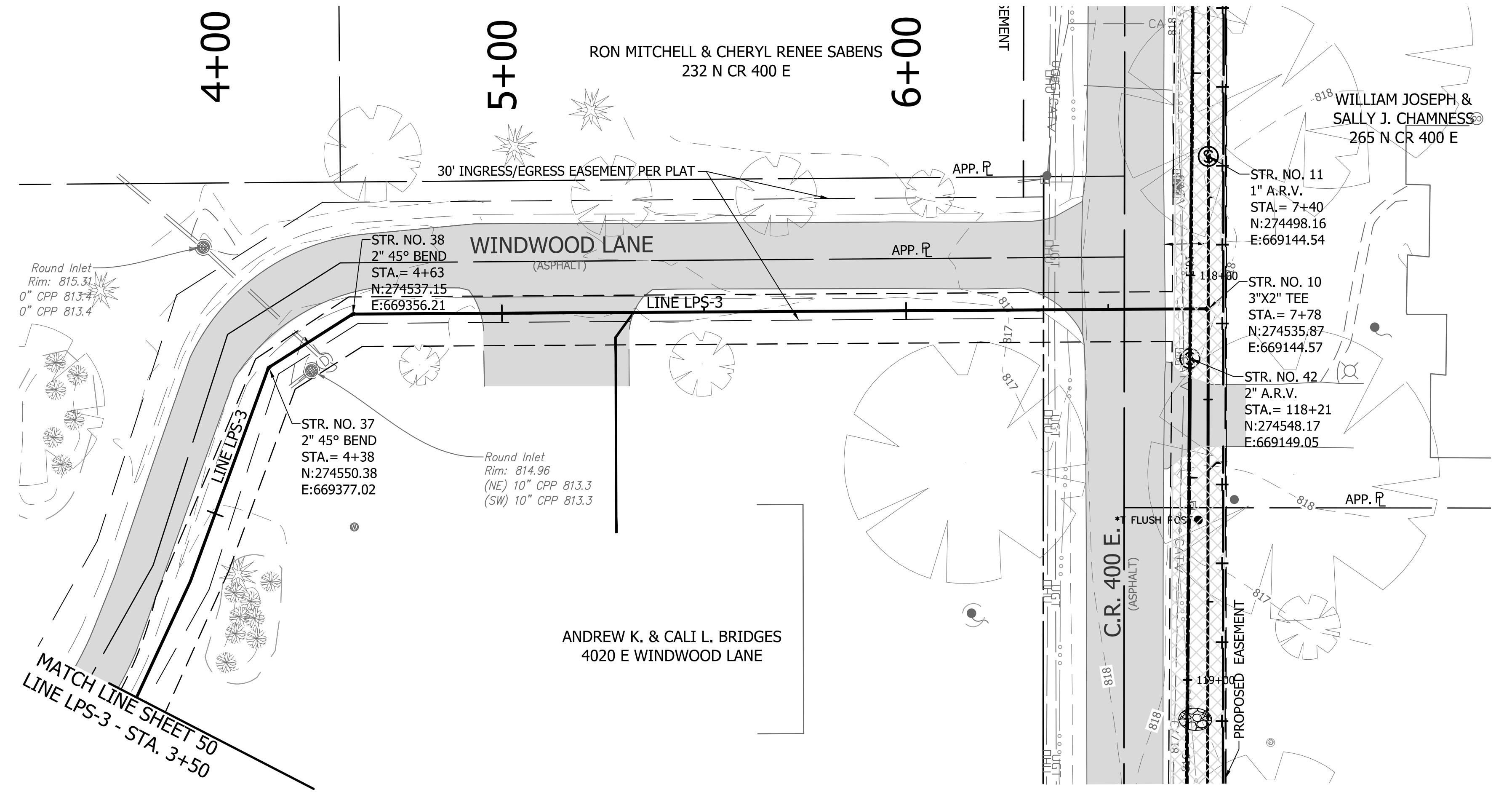
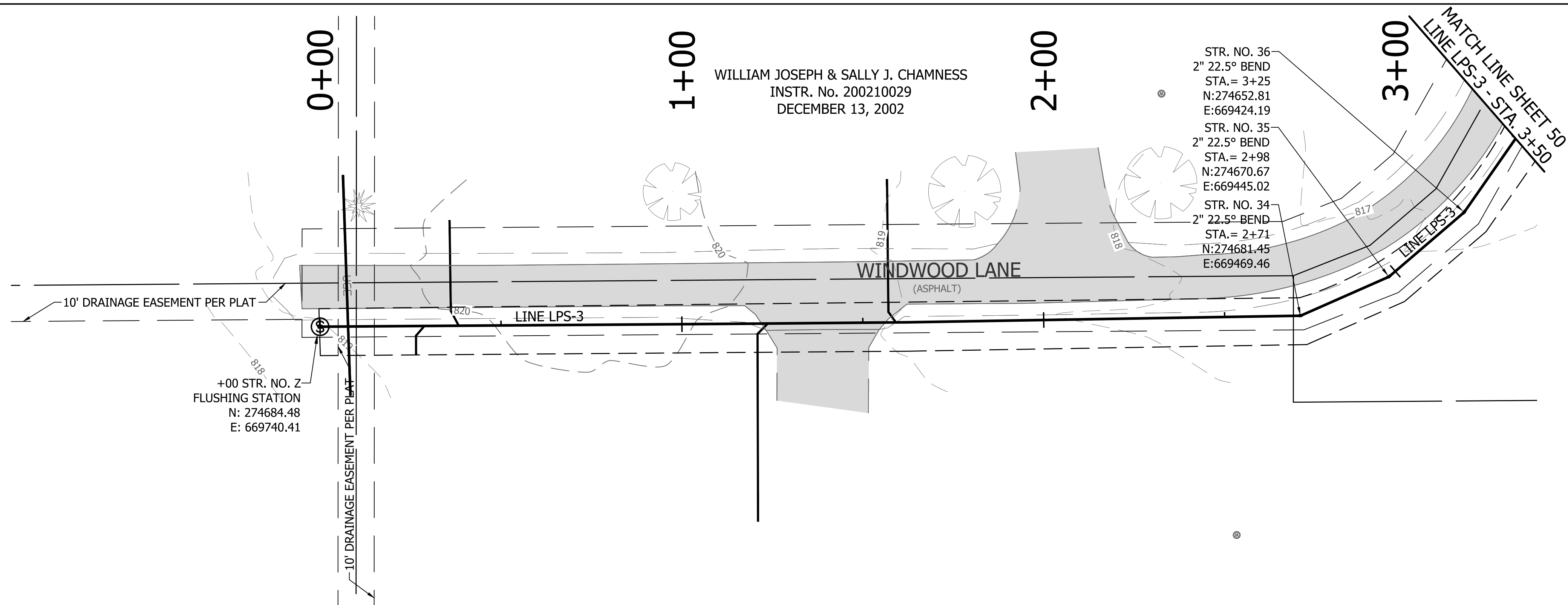
RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED: KDK	DRAWN: KDK	DATE
CHECKED: SJW	CHECKED: SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

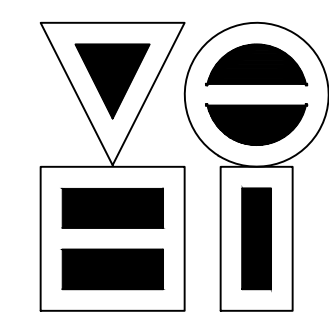
FORCE MAIN - LINE LPS-2 EROSION CONTROL PLAN

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	94 of 126
PROJECT	15-3371

DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\3-Erosion Control\FILE: EC LINE LPS-3.dwg
 DIMSCALE: 1" = 20'
 PLOTTED BY: J.Mowery
 DATE: Jun 06, 2018 - 7:03pm

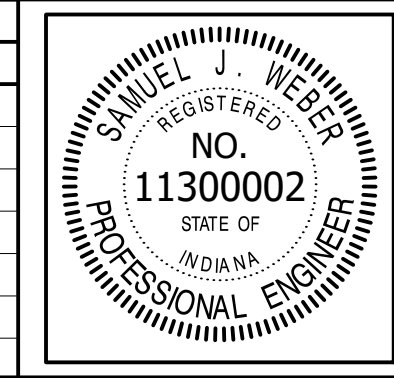


- LEGEND**
- TEMPORARY CONSTRUCTION ENTRANCE
 - SEEDING
 - EROSION CONTROL BLANKET
 - GRAVEL DONUT INLET PROTECTION
 - SILT FENCE
 - ROCK CHECK DAM
 - RIPRAP
 - CONSTRUCTION LIMITS



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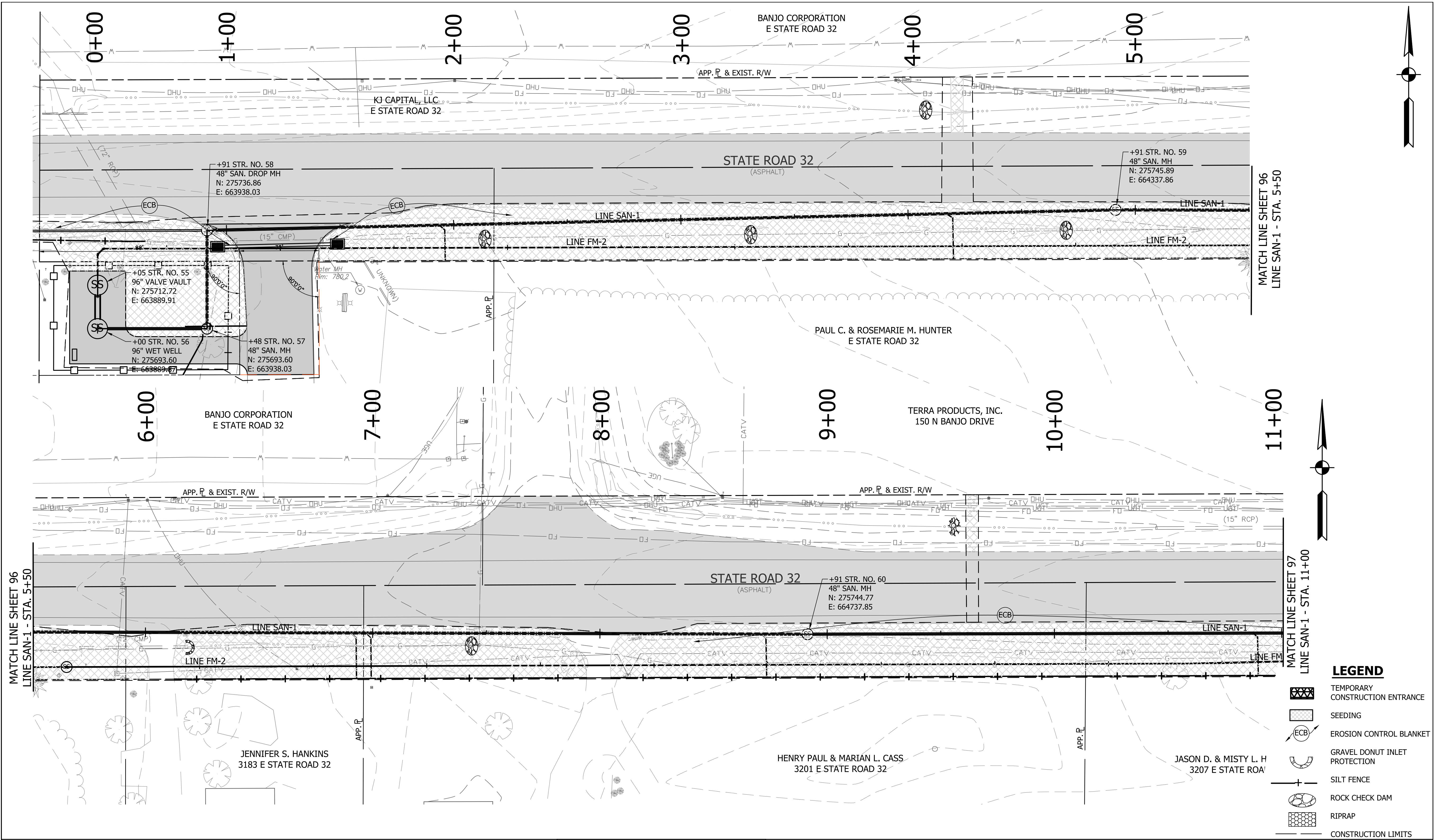


RECOMMENDED FOR APPROVAL		06/07/18
DESIGNED: KDK	DRAWN: KDK	DATE
CHECKED: SJW	CHECKED: SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
 LOW PRESSURE - LINE LPS-3
 EROSION CONTROL PLAN

HORIZONTAL SCALE	
1" = 20'	
VERTICAL SCALE	
1" = 5'	
SHEETS	
95	of 126
PROJECT	
15-3371	

DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\3-Erosion Control
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 DIMSCALE: 1/8"=1'-0"
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 7:04pm

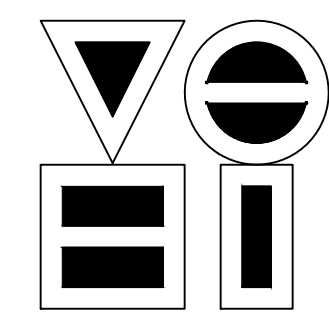


MATCH LINE SHEET 96
 LINE SAN-1 - STA. 5+50

MATCH LINE SHEET 96
 LINE SAN-1 - STA. 5+50

MATCH LINE SHEET 97
 LINE SAN-1 - STA. 11+00

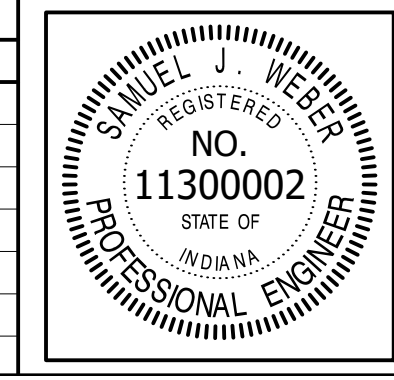
- LEGEND**
- TEMPORARY CONSTRUCTION ENTRANCE
 - SEEDING
 - EROSION CONTROL BLANKET
 - GRAVEL DONUT INLET PROTECTION
 - SILT FENCE
 - ROCK CHECK DAM
 - RIPRAP
 - CONSTRUCTION LIMITS



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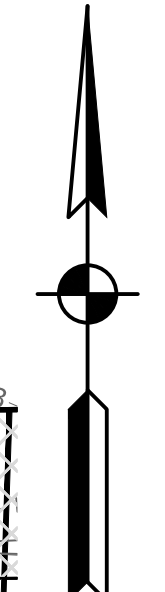
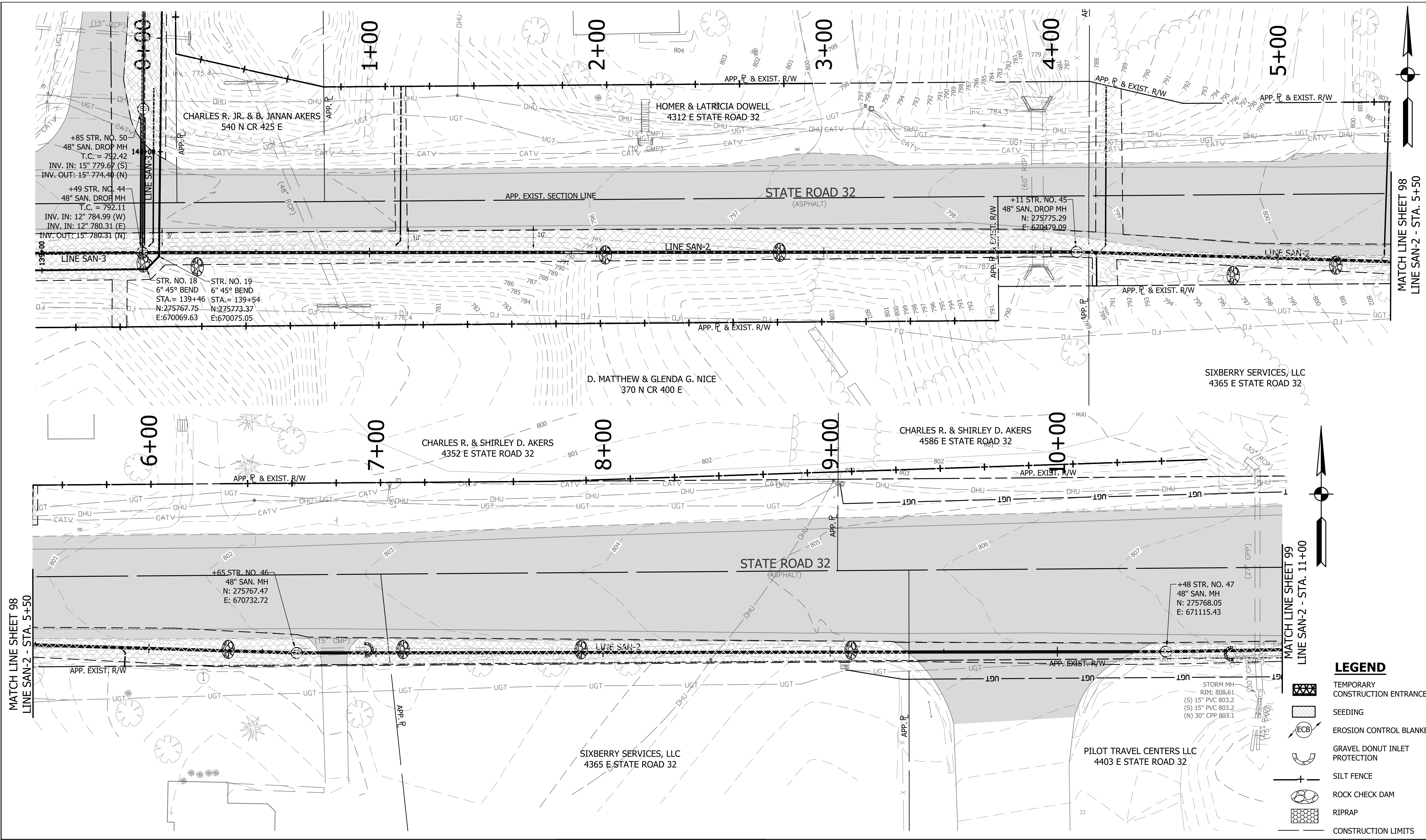
RECOMMENDED FOR APPROVAL		06/07/18
DESIGNED:	KDK	DRAWN:
CHECKED:	SJW	CHECKED:

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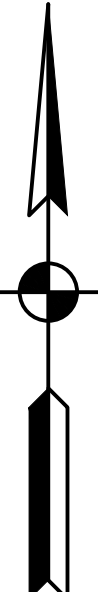
**GRAVITY SEWER - SAN-1
 EROSION CONTROL PLAN**

HORIZONTAL SCALE	
1" = 20'	
VERTICAL SCALE	
1" = 5'	
SHEETS	
96	of 126
PROJECT	
15-3371	

DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\3-Erosion Control
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 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 7:05pm



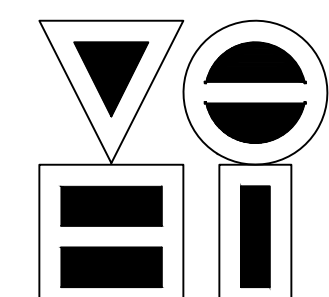
MATCH LINE SHEET 98
 LINE SAN-2 - STA. 5+50



MATCH LINE SHEET 99
 LINE SAN-2 - STA. 11+00

LEGEND

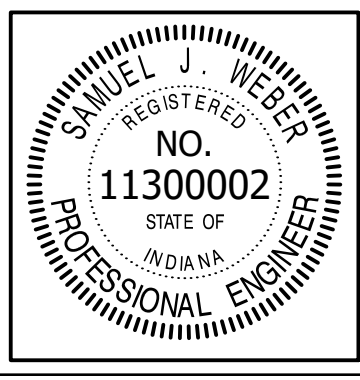
- TEMPORARY CONSTRUCTION ENTRANCE
- SEEDING
- EROSION CONTROL BLANKET
- GRAVEL DONUT INLET PROTECTION
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- RIPRAP
- CONSTRUCTION LIMITS



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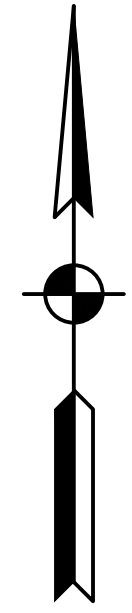
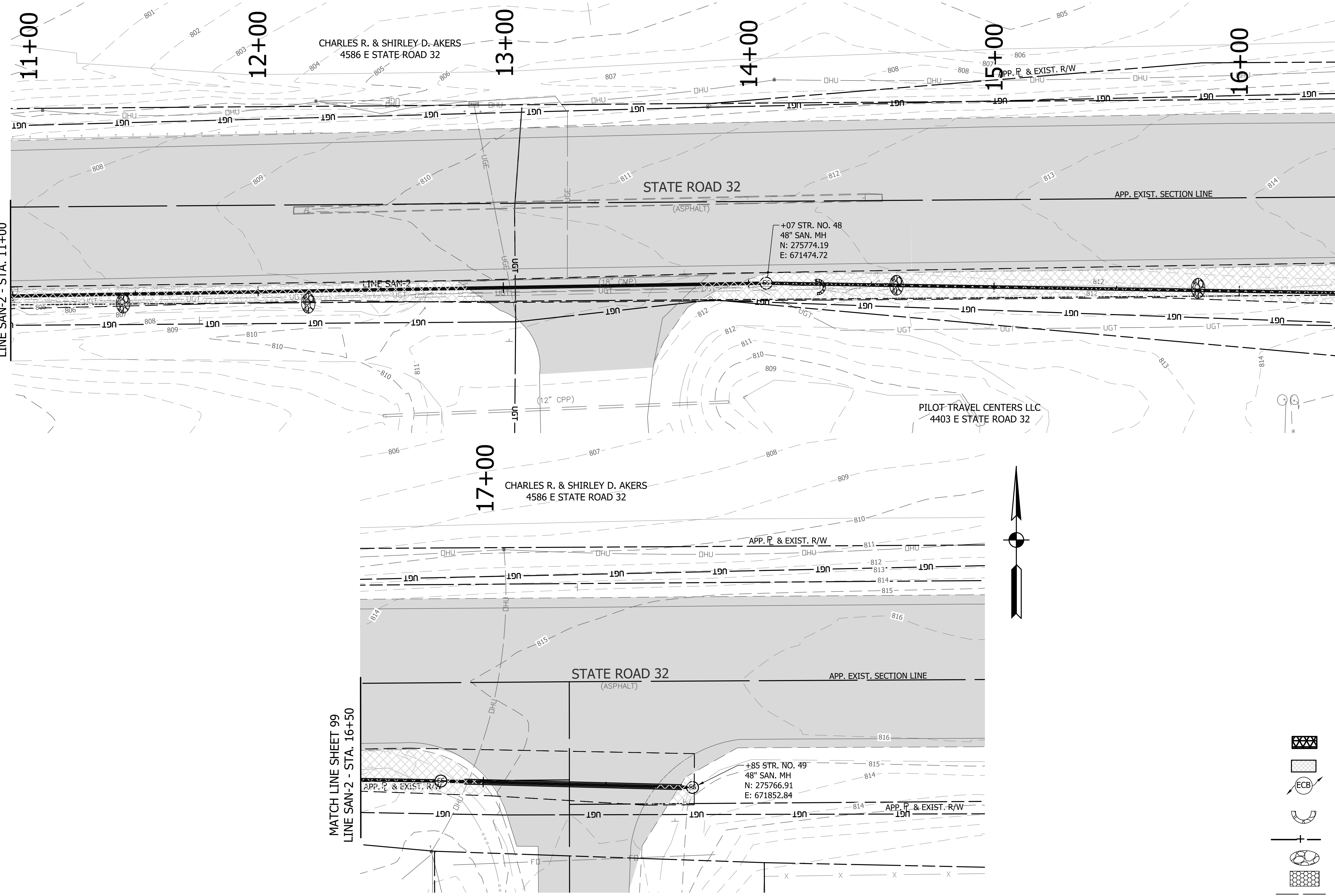


RECOMMENDED FOR APPROVAL		06/07/18
DESIGNED: KDK	DRAWN: KDK	DATE
CHECKED: SJW	CHECKED: SJW	

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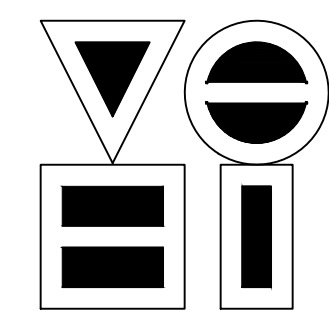
**GRAVITY SEWER - SAN-2
EROSION CONTROL PLAN**

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	98 of 126
PROJECT	15-3371



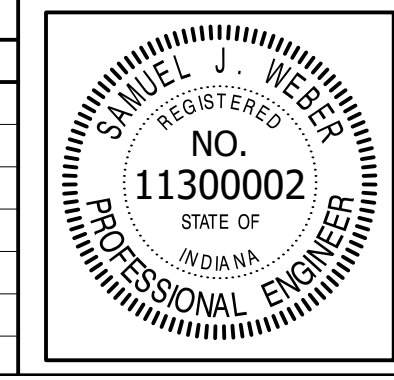
- LEGEND**
- TEMPORARY CONSTRUCTION ENTRANCE
 - SEEDING
 - EROSION CONTROL BLANKET
 - GRAVEL DONUT INLET PROTECTION
 - SILT FENCE
 - ROCK CHECK DAM
 - RIPRAP
 - CONSTRUCTION LIMITS

DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\3-Erosion Control\FILE: EC LINE SAN-2.dwg
 DIMSCALE: 1 LTSCALE: 20
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 7:06pm



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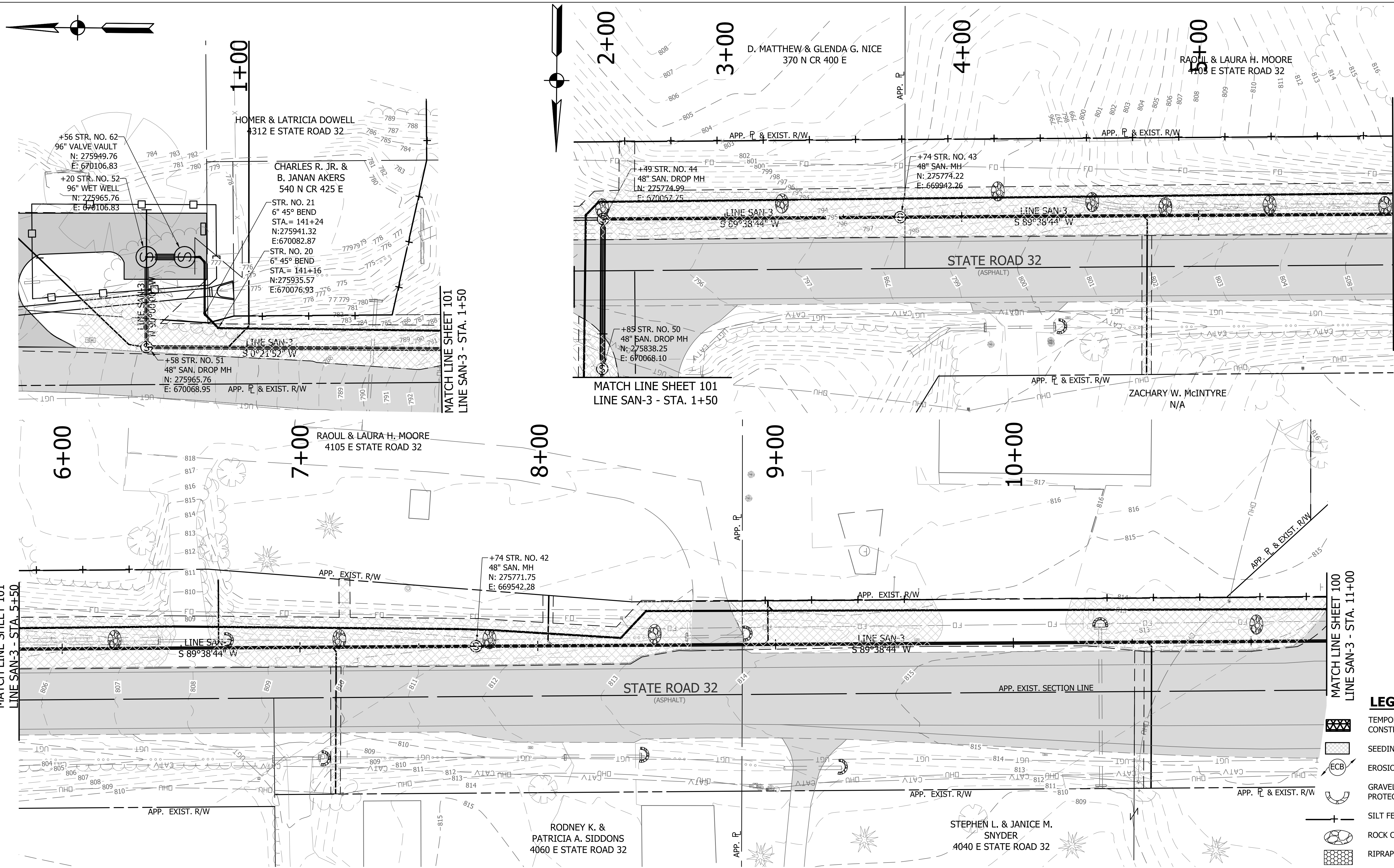
RECOMMENDED FOR APPROVAL		06/07/18
DESIGNED: KDK	DRAWN: KDK	DATE
CHECKED: SJW	CHECKED: SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

GRAVITY SEWER - SAN-2 EROSION CONTROL PLAN

HORIZONTAL SCALE	
1" = 20'	
VERTICAL SCALE	
1" = 5'	
SHEETS	
99	of 126
PROJECT	
15-3371	

DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\3-Erosion Control
 FILE: EC LINE SAN-3.dwg
 DIMSCALE: 1/4" = 1' LTSCALE: 20
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 7:07pm



MATCH LINE SHEET 101
LINE SAN-3 - STA. 5+50

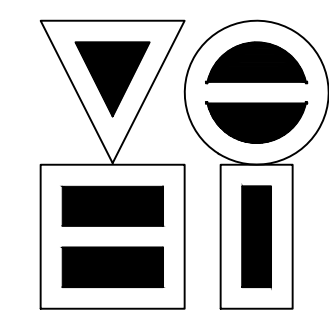
MATCH LINE SHEET 101
LINE SAN-3 - STA. 1+50

MATCH LINE SHEET 101
LINE SAN-3 - STA. 5+50

MATCH LINE SHEET 100
LINE SAN-3 - STA. 11+00

LEGEND

- TEMPORARY CONSTRUCTION ENTRANCE
- SEEDING
- EROSION CONTROL BLANKET
- GRAVEL DONUT INLET PROTECTION
- SILT FENCE
- ROCK CHECK DAM
- RIPRAP
- CONSTRUCTION LIMITS

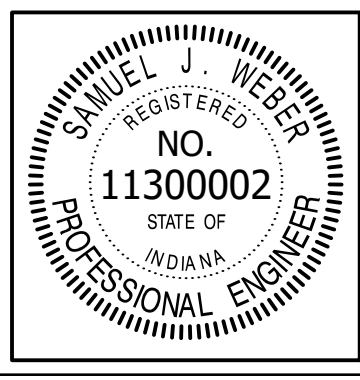


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REVISIONS		
NO.	DATE	DESCRIPTION



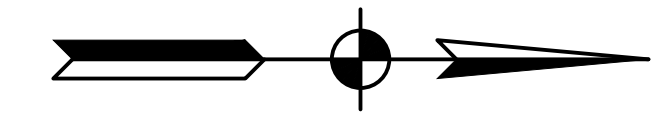
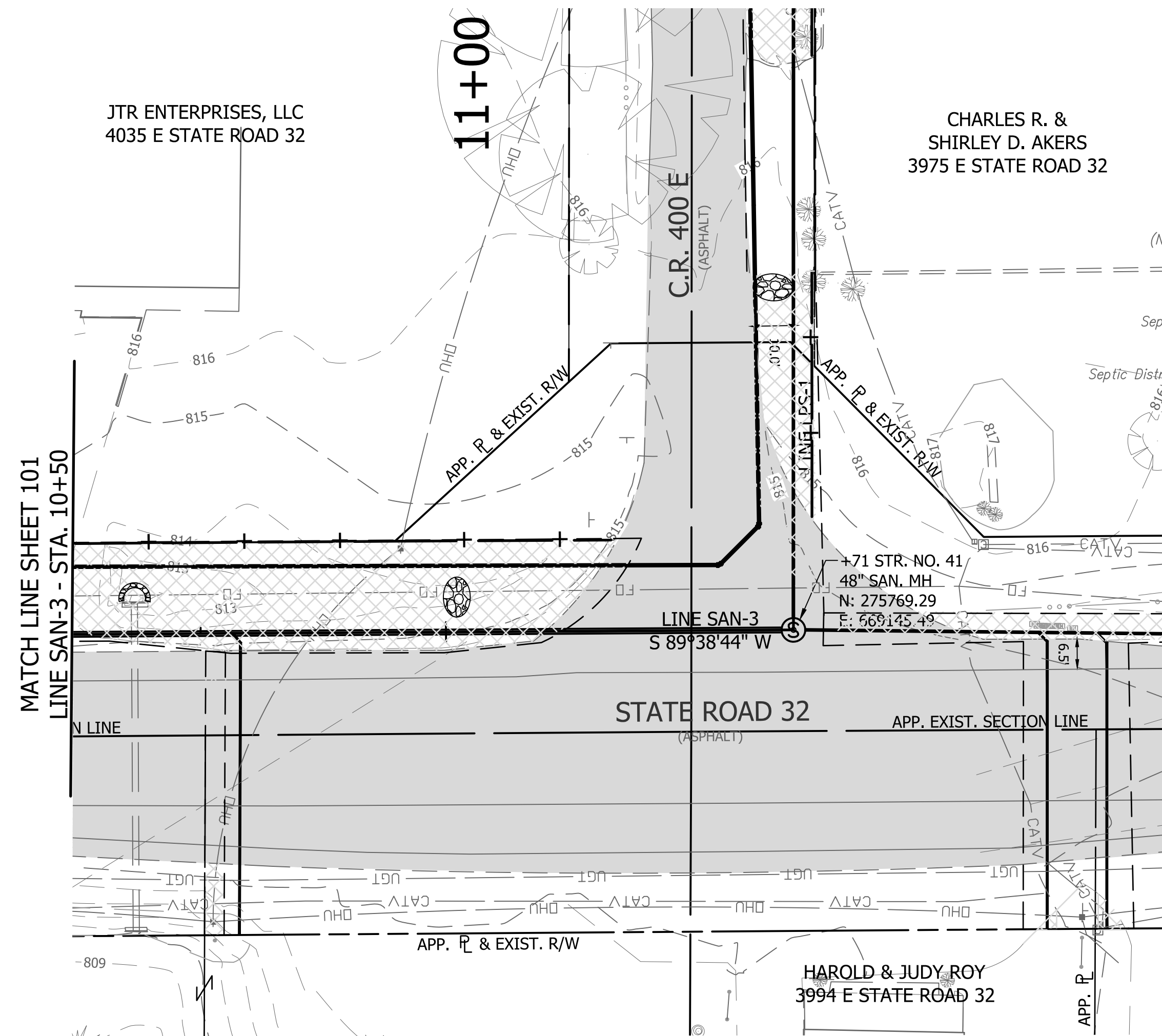
RECOMMENDED FOR APPROVAL		DATE
DESIGNED: KDK	DRAWN: KDK	06/07/18
CHECKED: SJW	CHECKED: SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

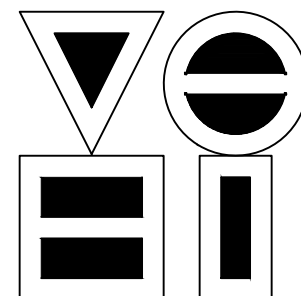
**GRAVITY SEWER - SAN-3
EROSION CONTROL PLAN**

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	1" = 5'
SHEETS	100 of 126
PROJECT	15-3371

DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\3-Erosion Control\
 FILE: EC LINE SAN-3.dwg
 DIMSCALE: 1/8"=1'-0"
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 7:07pm



- LEGEND**
- TEMPORARY CONSTRUCTION ENTRANCE
 - SEEDING
 - EROSION CONTROL BLANKET
 - GRAVEL DONUT INLET PROTECTION
 - SILT FENCE
 - ROCK CHECK DAM
 - RIPRAP

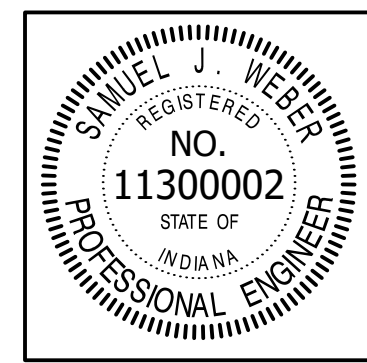


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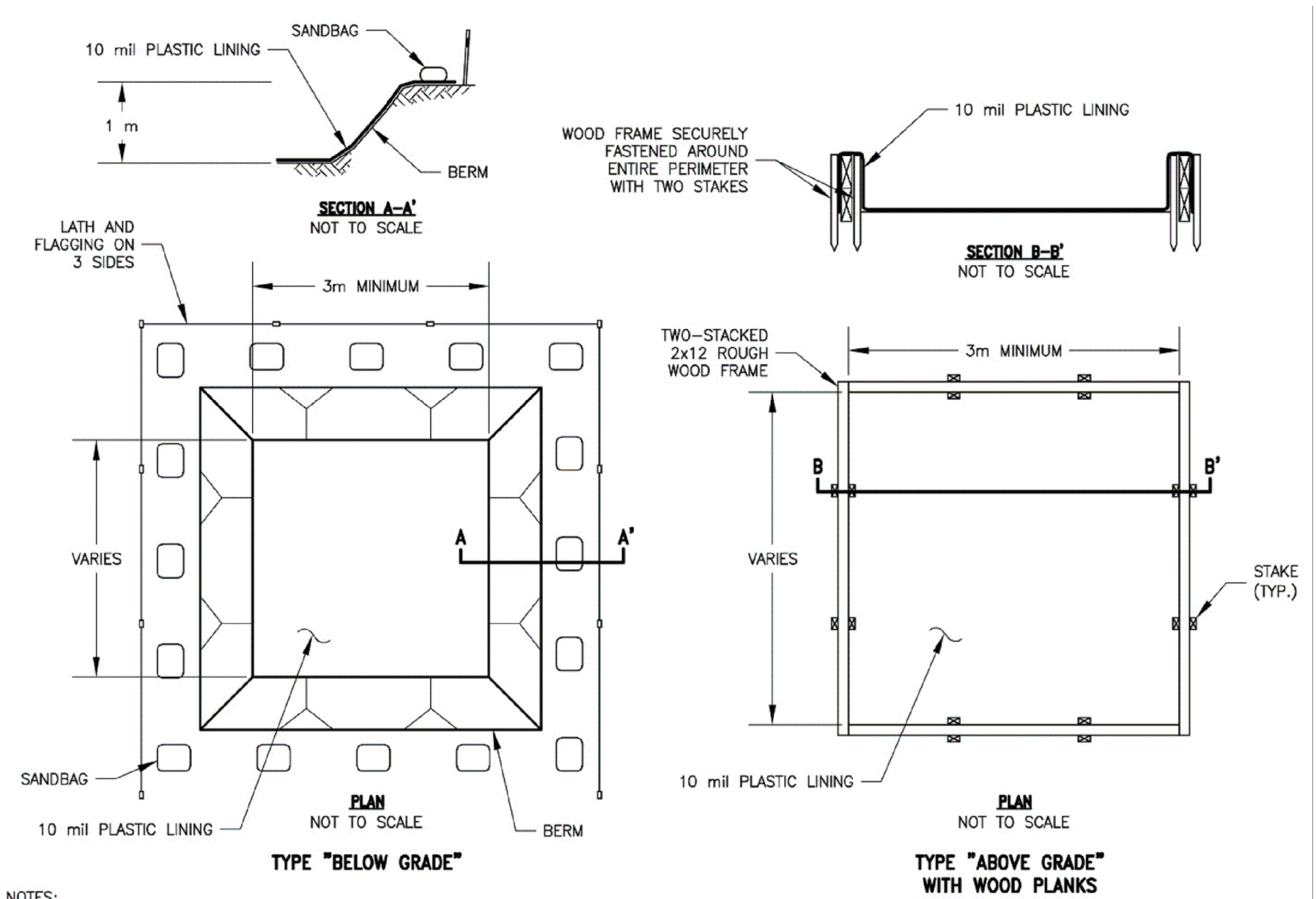
REVISIONS			
NO.	DATE	DESCRIPTION	BY



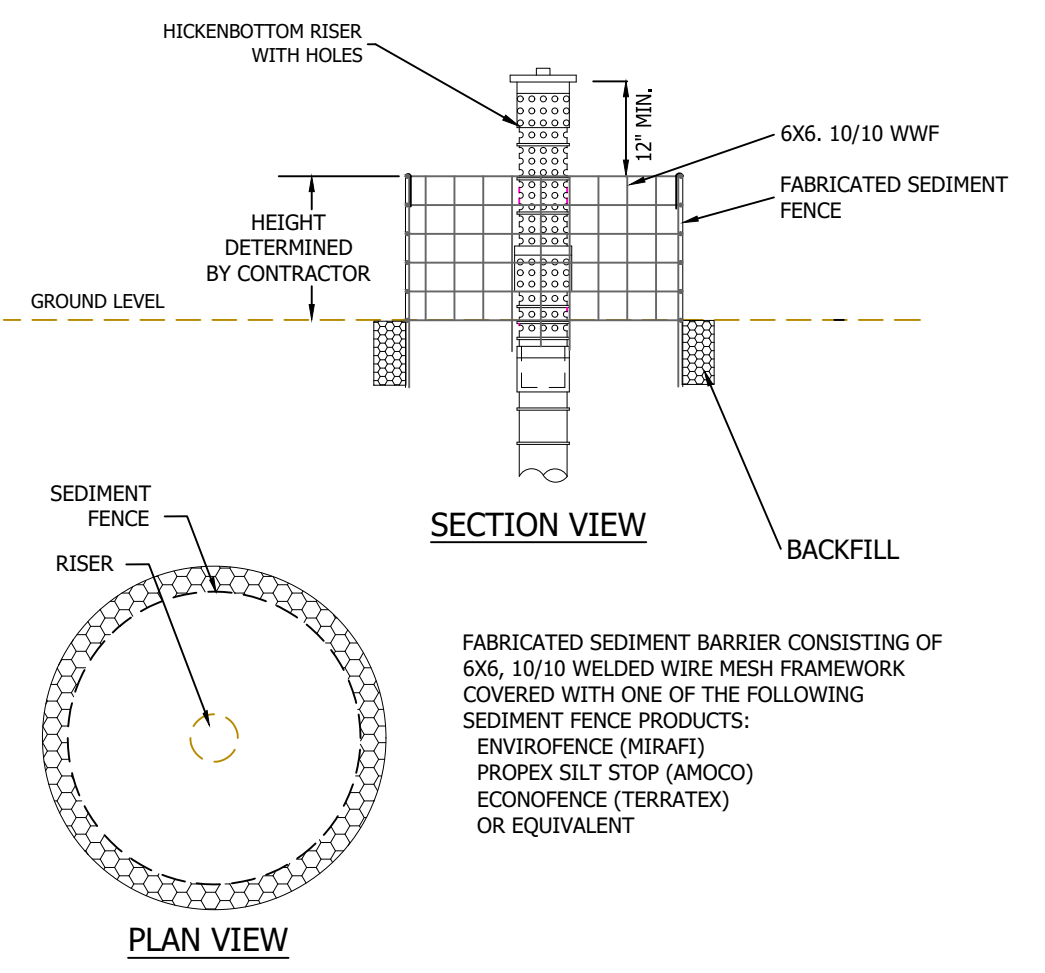
RECOMMENDED FOR APPROVAL		06/07/18
DESIGNED: KDK	DRAWN: KDK	DATE
CHECKED: SJW	CHECKED: SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM	
GRAVITY SEWER - SAN-3	
EROSION CONTROL PLAN	

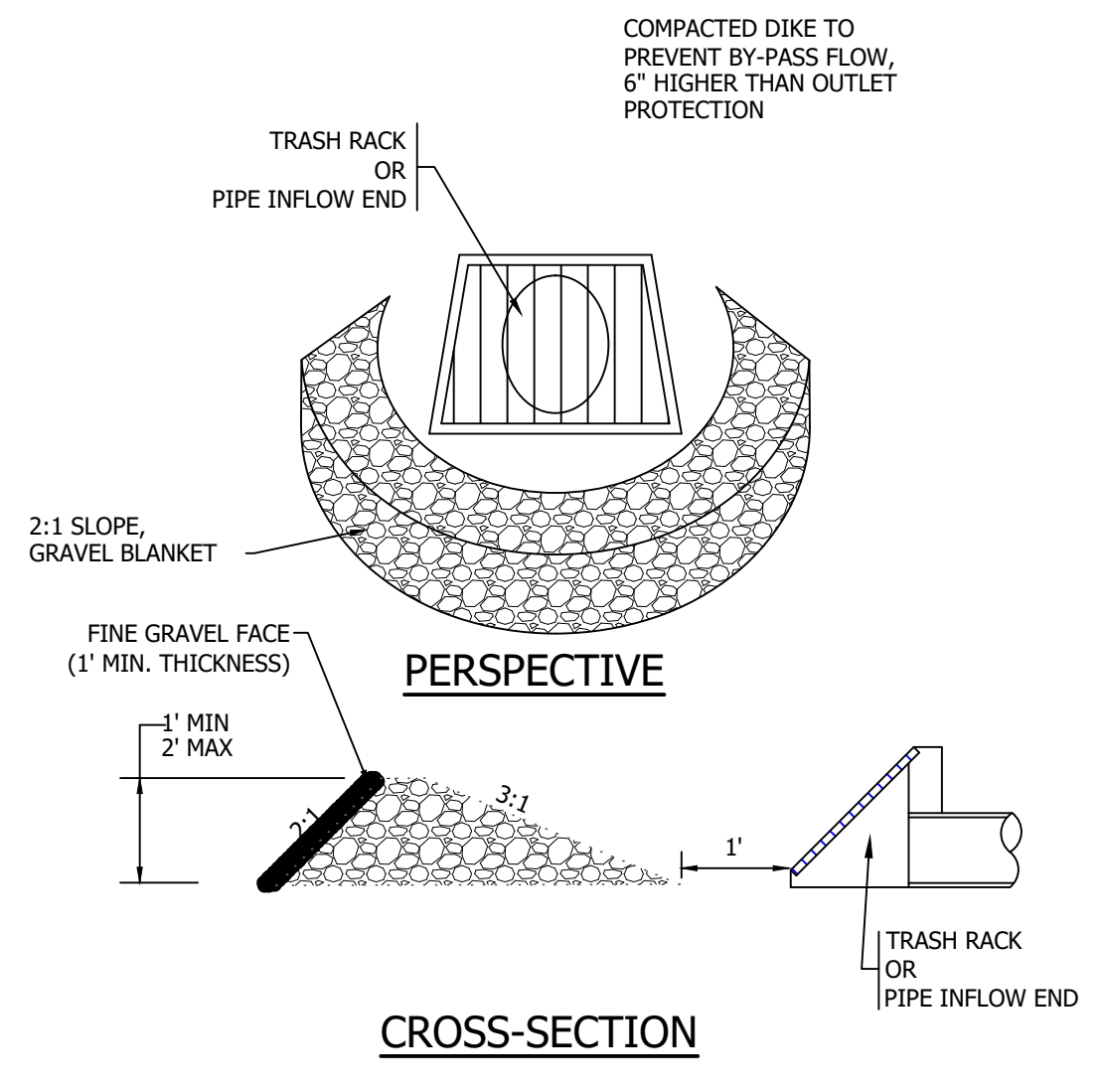
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1" = 20'	
VERTICAL SCALE	
1" = 5'	
SHEETS	
101	of 126
PROJECT	
15-3371	



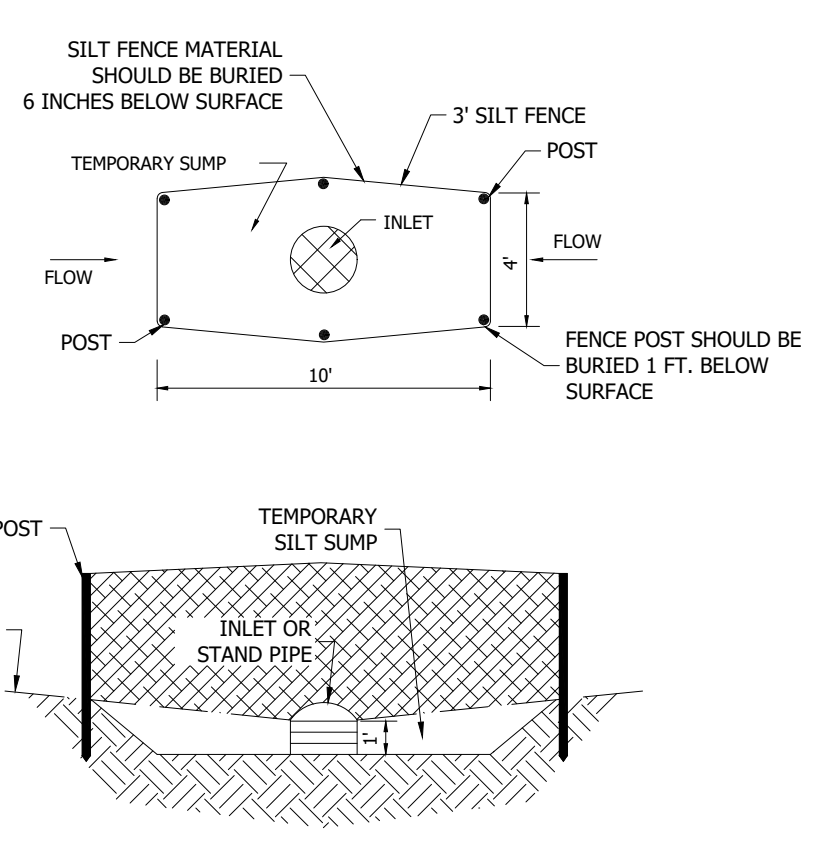
CONCRETE WASHOUT TYPES
DETAIL NOT TO SCALE



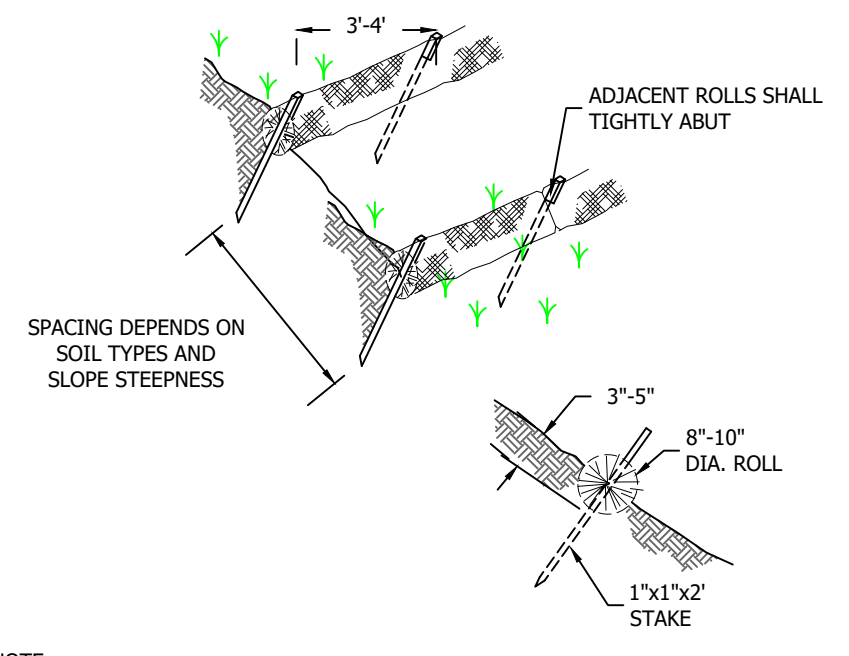
RISER SEDIMENT PROTECTION
DETAIL NOT TO SCALE



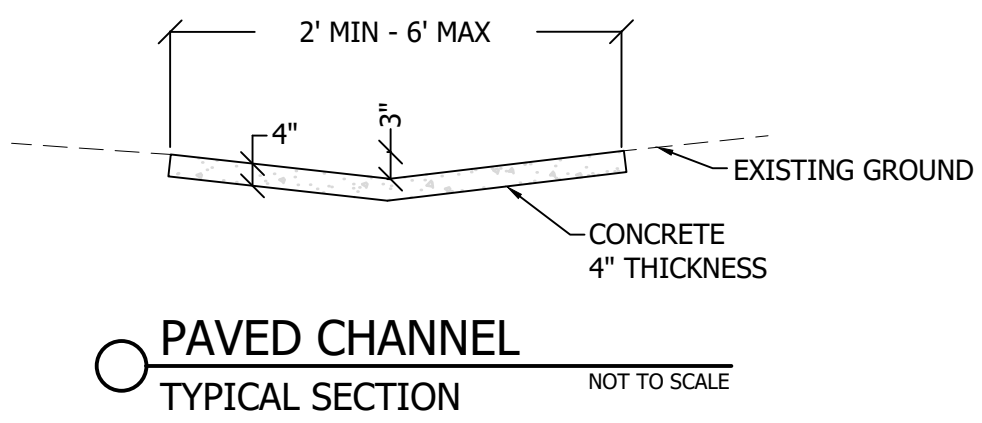
GRAVEL DONUT INLET PROTECTION
(PRACTICE NO. 3.56) NOT TO SCALE



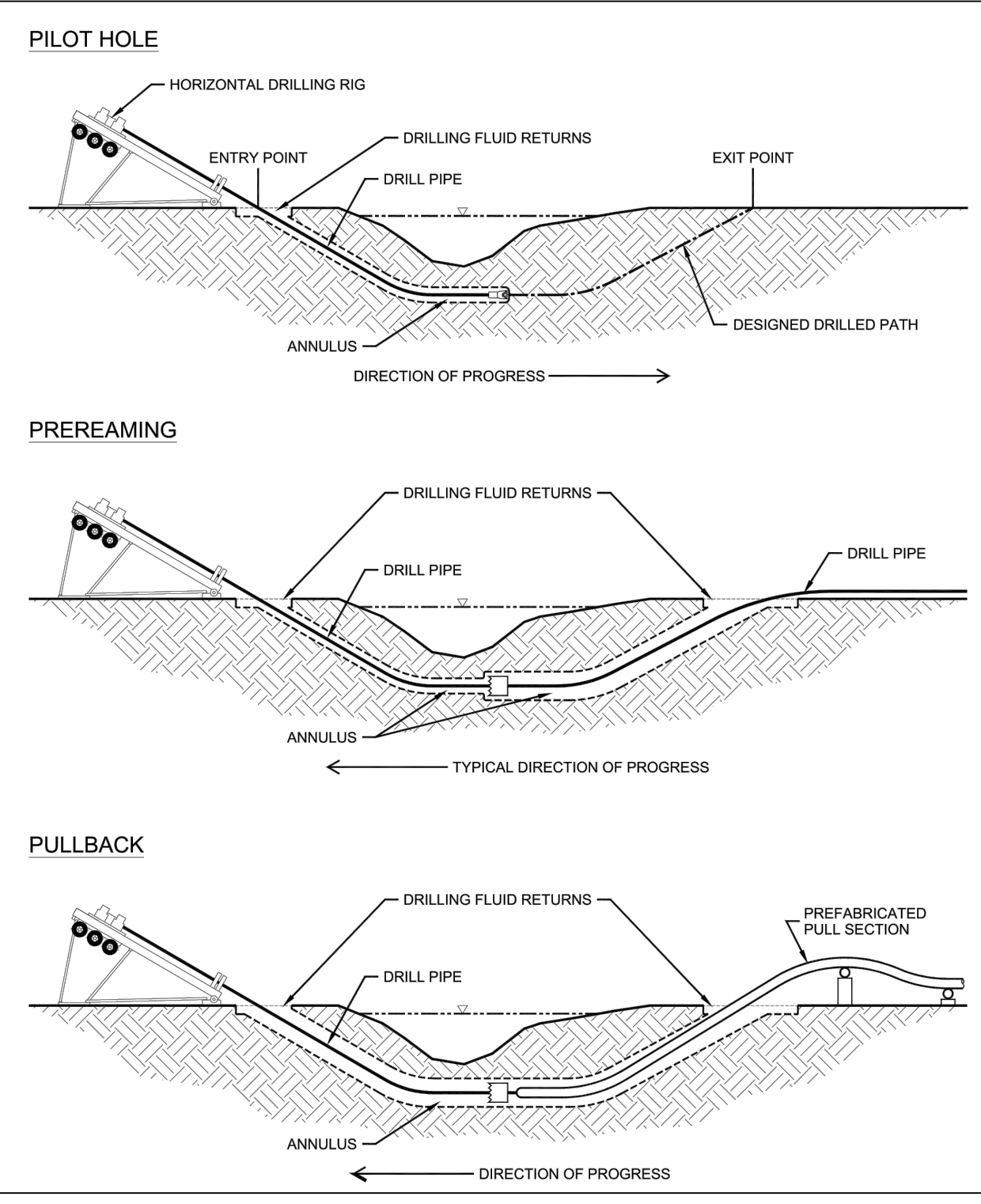
FABRIC DROP INLET PROTECTION
(PRACTICE NO. 352) NOT TO SCALE



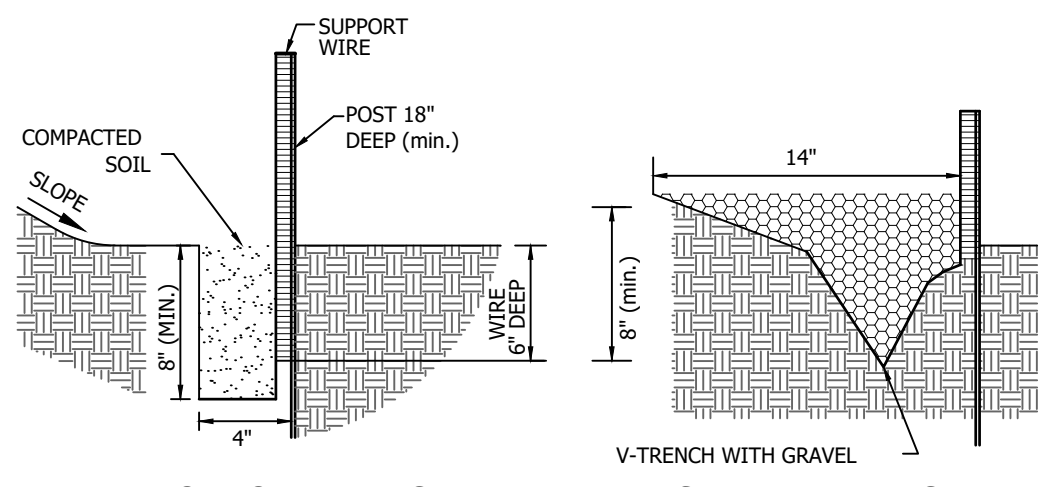
STRAW WATTLE
(PRACTICE NO. 352) NOT TO SCALE



PAVED CHANNEL
TYPICAL SECTION NOT TO SCALE



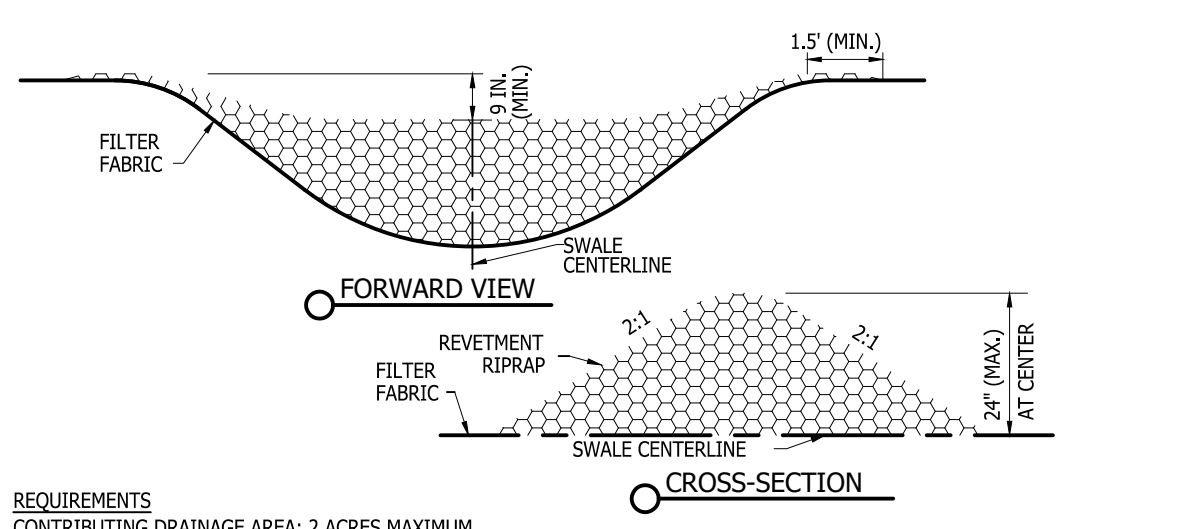
BORING DRILLING/REEVING PIT
TYPICAL SECTION NOT TO SCALE



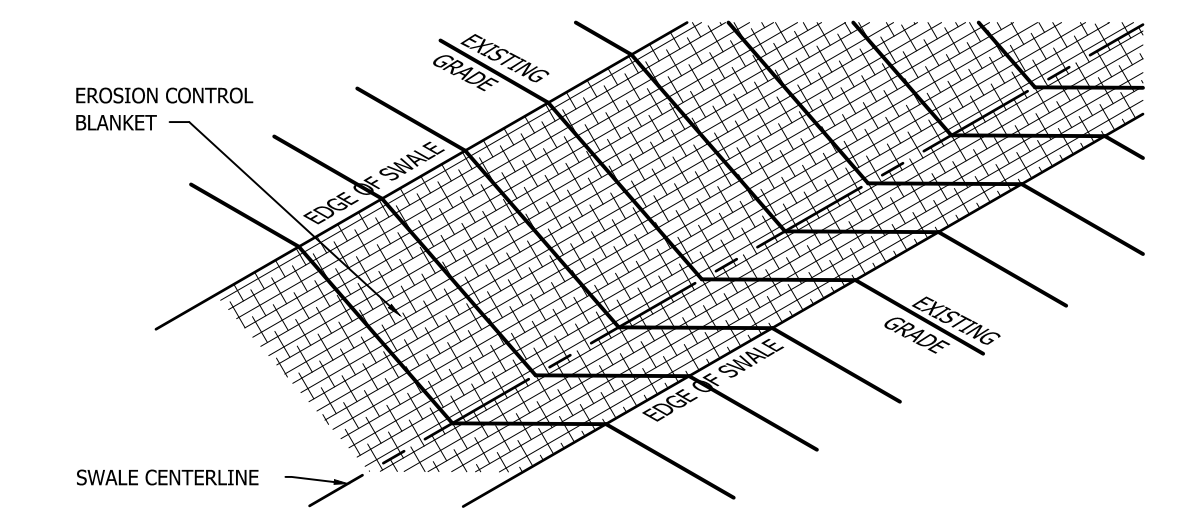
FLAT-BOTTOM TRENCH
V-SHAPED TRENCH

- ALONG THE ENTIRE FENCE LINE, DIG AN 8" DEEP FLAT-BOTTOMED OR V-SHAPED TRENCH.
- ON THE DOWN SLOPE SIDE OF THE TRENCH, DRIVE THE WOOD OR STEEL SUPPORT POSTS AT LEAST 1' INTO THE GROUND, SPACING THEM NO MORE THAN 8' APART IF THE FENCE IS SUPPORTED BY WIRE OR 6" IF EXTRA STRENGTH FABRIC IS USED WITHOUT SUPPORT WIRE. ADJUST SPACING, IF NECESSARY, TO ENSURE THAT POSTS ARE SET AT THE LOW POINTS ALONG THE FENCE LINE. (NOTE: IF THE FENCE HAS PRE-ATTACHED POSTS OR STAKES, DRIVE THEM DEEP ENOUGH SO THE FABRIC IS SATISFACTORILY IN THE TRENCH).
- FASTEN SUPPORT WIRE FENCE (IF THE MANUFACTURER RECOMMENDS ITS USE) TO THE UPSLOPE SIDE OF THE POSTS, EXTENDING IT 8" INTO THE TRENCH.
- RUN A CONTINUOUS LENGTH OF GEOTEXTILE FABRIC IN FRONT (UPSLOPE) OF THE SUPPORT WIRE AND POSTS, AVOIDING JOINTS, PARTICULARLY AT LOW POINTS IN THE FENCE LINE.
- IF A JOINT IS NECESSARY, NAIL THE OVERLAP TO THE NEAREST POST WITH LATH.
- PLACE THE BOTTOM 1' OF FABRIC IN THE 8" DEEP TRENCH, EXTENDING THE REMAINING 4" TOWARD THE UPSLOPE SIDE.
- BACKFILL THE TRENCH WITH COMPACTED EARTH OR GRAVEL.

SILT FENCE-SEDIMENT FENCE
(PRACTICE NO. 3.74) NOT TO SCALE



- EROSION CONTROL ROCK CHECK DAM**
(PRACTICE NO. 3.25) NOT TO SCALE
- REQUIREMENTS**
- CONTRIBUTING DRAINAGE AREA: 2 ACRES MAXIMUM.
- DAM CENTER: 2 FT. MAX. HEIGHT BUT AT LEAST 9 IN. LOWER THAN THE OUTER EDGES AT NATURAL GROUND ELEVATION.
- DAM SIDE SLOPE: 2:1 OR FLATTER
- DISTANCE BETWEEN DAMS: SPACED SO THE TOE OF THE UPSTREAM DAM IS THE SAME ELEVATION AS THE TOP OF THE DOWNSTREAM DAM.
- OVERFLOW AREAS ALONG CHANNEL- STABILIZED TO RESIST EROSION.
- ROCK SIZE: INDOT REVIEMENT RIPRAP.
- INSTALLATION**
- EXCAVATE A CUTOFF TRENCH INTO THE DITCH BANKS, AND EXTEND IT A MINIMUM OF 18 IN. BEYOND THE ABUTMENTS.
 - PLACE THE ROCK IN THE CUTOFF TRENCH AND CHANNEL. CENTER A MAXIMUM OF 2 FT. HIGH YET 9 IN. BELOW WHERE THE DAM ABUTS THE CHANNEL BANKS.
 - EXTEND THE ROCK AT LEAST 18 IN. BEYOND THE CHANNEL BANKS TO KEEP OVERFLOW WATER FROM UNDERCUTTING THE DAM AS IT RE-ENTERS THE CHANNEL.
 - INSTALL AS MANY DAMS AS NECESSARY TO SATISFY THE SPACING REQUIREMENTS.
 - STABILIZE THE CHANNEL ABOVE THE UPPERMOST DAM.
 - RECOGNIZING THAT WATER WILL FLOW OVER AND AROUND THE LOWERMOST DAM, PROTECT THE CHANNEL DOWN STREAM FROM IT WITH AN EROSION-RESISTANT LINING FOR A DISTANCE OF 6 FT. UNLESS THE CHANNEL IS PROTECTED THROUGH OTHER MEANS.

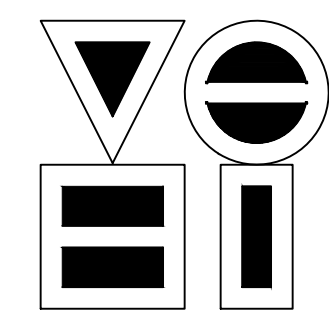


- REQUIREMENTS**
- MATERIAL: EITHER AN ORGANIC (STRAW, EXCELSIOR, WOVEN PAPER, COCONUT, FIBER, ETC.) OR A SYNTHETIC MULCH INCORPORATED INTO A POLYPROPYLENE OR SIMILAR NETTING MATERIAL. IT MAY BE BIODEGRADABLE, PHOTODEGRADABLE OR PERMANENT.
- NETTING MATERIAL: IT MAY BE BIODEGRADABLE, PHOTODEGRADABLE OR PERMANENT.
- EXPECTED LIFE: 2 YEARS MAXIMUM
- ANCHORING: USE OF STAPLES OR STAKES TO PREVENT MOVEMENT OR DISPLACEMENT
- INSTALLATION**
- SELECT THE TYPE AND WEIGHT OF EROSION CONTROL BLANKET TO FIT THE SITE CONDITIONS.
 - INSTALL ANY PRACTICES NEEDED TO CONTROL EROSION AND RUNOFF, SUCH AS TEMPORARY OR PERMANENT DIVERSION, SEDIMENT BASIN OR TRAP, SILT FENCE, AND STRAW BALE DAM.
 - GRADE THE SITE AS SPECIFIED IN THE CONSTRUCTION PLAN.
 - ADD TOP SOIL, WHERE APPROPRIATE.
 - PREPARE THE SEEDBED, FERTILIZE, AND SEED THE AREA IMMEDIATELY AFTER GRADING.
 - FOLLOWING MANUFACTURER'S DIRECTIONS, LAY THE BLANKETS ON THE SEEDBED AREA SUCH THAT THEY ARE IN THE CONTINUOUS CONTACT WITH THE SOIL AND THAT THE UPSLOPE OR UPSTREAM ONES OVERLAP THE LOWER ONES BY AT LEAST 8 IN.
 - TUCK THE UPPERMOST EDGE OF THE UPPER BLANKETS INTO A CHECK SLOT (SILT TRENCH), BACKFILL WITH SOIL, AND TAMP DOWN.
 - ANCHOR THE BLANKETS AS SPECIFIED BY THE MANUFACTURER. THIS INVOLVES DRIVING 6"-8" METAL STAPLES INTO THE GROUND IN A PATTERN DETERMINED BY THE SITE CONDITIONS.
- NOTE: BLANKET SHALL BE INSTALLED PER MANUFACTURERS INSTALLATION SPECIFICATION IN THE LOWER 1 FT OF SWALE
- AREAS REQUIRING EROSION CONTROL BLANKET TYPE I (SWALES AND CHANNELS) SHALL HAVE THE FOLLOWING TYPE BLANKET:
SEED MIXTURE TO BE COVERED WITH A BLANKET (TYPE I) MADE OF 100% AGRICULTURAL STRAW COVERED ON THE TOP SIDE WITH A POLYPROPYLENE NETTING HAVING AN APPROXIMATE 1/2" X 1/2" MESH AND BE SEWN TOGETHER WITH COTTON THREAD. THE EROSION CONTROL BLANKET SHALL BE S75 AS MANUFACTURED BY NORTH AMERICAN GREEN OR EQUIVALENT.
 - AREAS REQUIRING EROSION CONTROL BLANKET TYPE II (POND AREAS) SHALL HAVE THE FOLLOWING TYPE BLANKET:
SEED MIXTURE TO BE COVERED WITH A BLANKET (TYPE II) MADE OF 70% AGRICULTURAL STRAW AND 30% COCONUT FIBER COVERED ON THE TOP SIDE WITH A POLYPROPYLENE NETTING HAVING AN APPROXIMATE 5/8" X 5/8" MESH CONTAINING ULTRAVIOLET ADDITIVES TO RESIST BREAKDOWN, AND ON THE BOTTOM WITH A POLYPROPYLENE NETTING WITH AN APPROXIMATE 1/2" X 1/2" MESH. THE BLANKET SHALL BE SEWN TOGETHER WITH COTTON THREAD. THE EROSION CONTROL BLANKET SHALL BE SC150 AS MANUFACTURED BY NORTH AMERICAN GREEN OR EQUIVALENT.
 - AREAS REQUIRING EROSION CONTROL BLANKET TYPE III (PIPE OUTFALLS) SHALL HAVE THE FOLLOWING TYPE BLANKET:
SEED MIXTURE TO BE COVERED WITH A BLANKET (TYPE III) MADE OF 100% NYLON FIBER. THE BLANKET SHALL BE COVERED ON THE TOP AND BOTTOM WITH A BLACK POLYPROPYLENE NETTING HAVING ULTRAVIOLET ADDITIVES TO REDUCE BREAKDOWN AND AN APPROXIMATE 5/8" X 5/8" MESH. THE BLANKET SHALL BE SEWN TOGETHER WITH POLYESTER THREAD. THE EROSION CONTROL BLANKET SHALL BE SC150 AS MANUFACTURED BY NORTH AMERICAN GREEN OR EQUIVALENT.

EROSION CONTROL BLANKET DETAIL
(PRACTICE NO. 3.17) NOT TO SCALE

NOT ALL OF THE EROSION CONTROL PRACTICES SHOWN ARE CALLED FOR IN THE PLANS.
THE ADDITIONAL EROSION CONTROL PRACTICES ARE SOLUTIONS TO POSSIBLE EROSION CONTROL PROBLEMS

DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\3-Erosion Control
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DIMSCALE: 20 LSCALE: 0.5
PLOTTED BY: jmovery
DATE: Jun 06, 2018 - 7:08pm

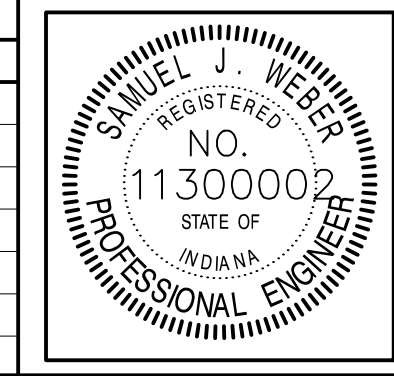


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REVISIONS			
NO.	DATE	DESCRIPTION	BY



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DESIGNED:	KDK	DRAWN:
CHECKED:	SJW	CHECKED:

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

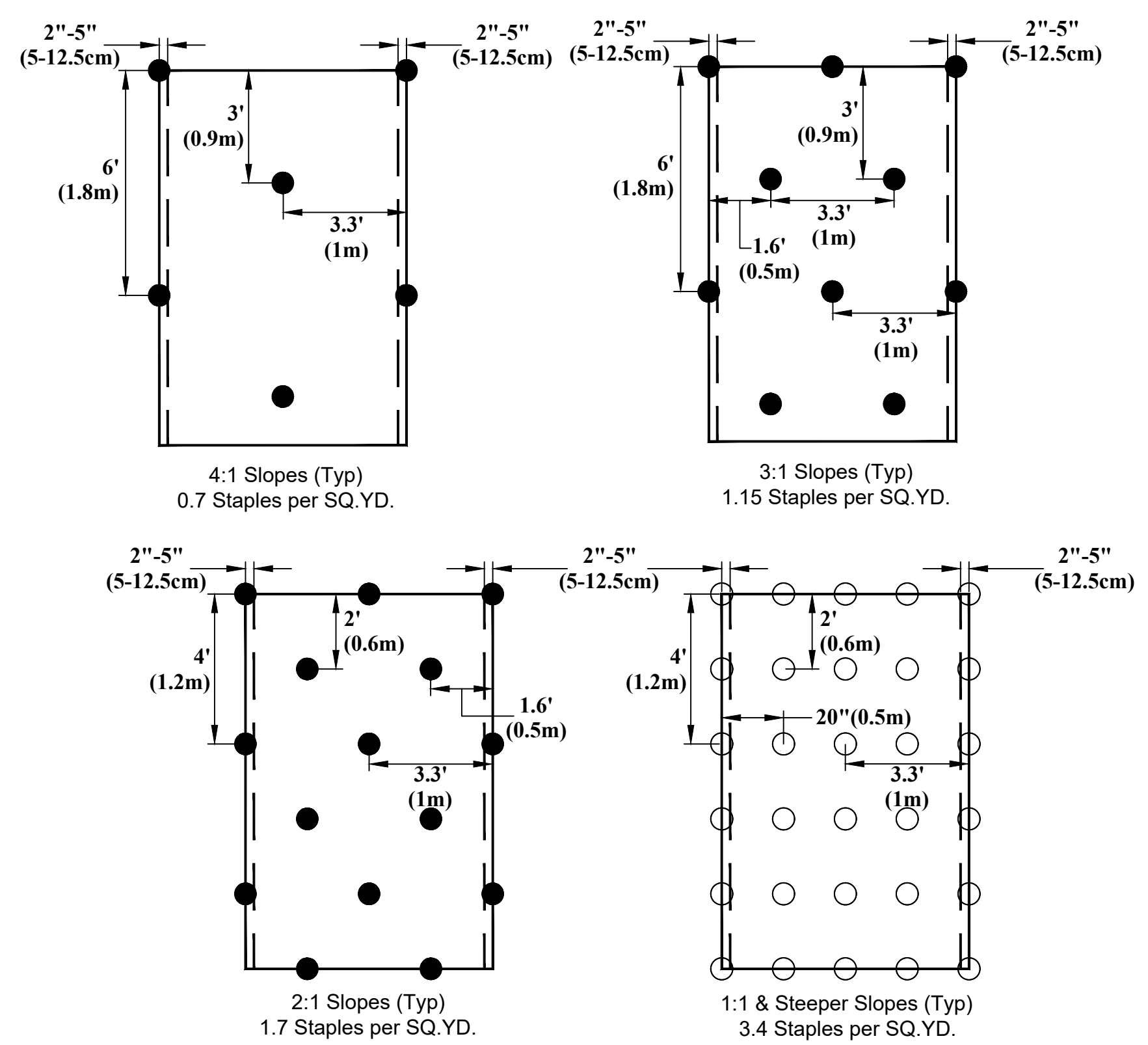
STORM WATER POLLUTION PREVENTION & EROSION CONTROL DETAILS

HORIZONTAL SCALE	AS NOTED
VERTICAL SCALE	AS NOTED
SHEETS	102 of 126
PROJECT	15-3371

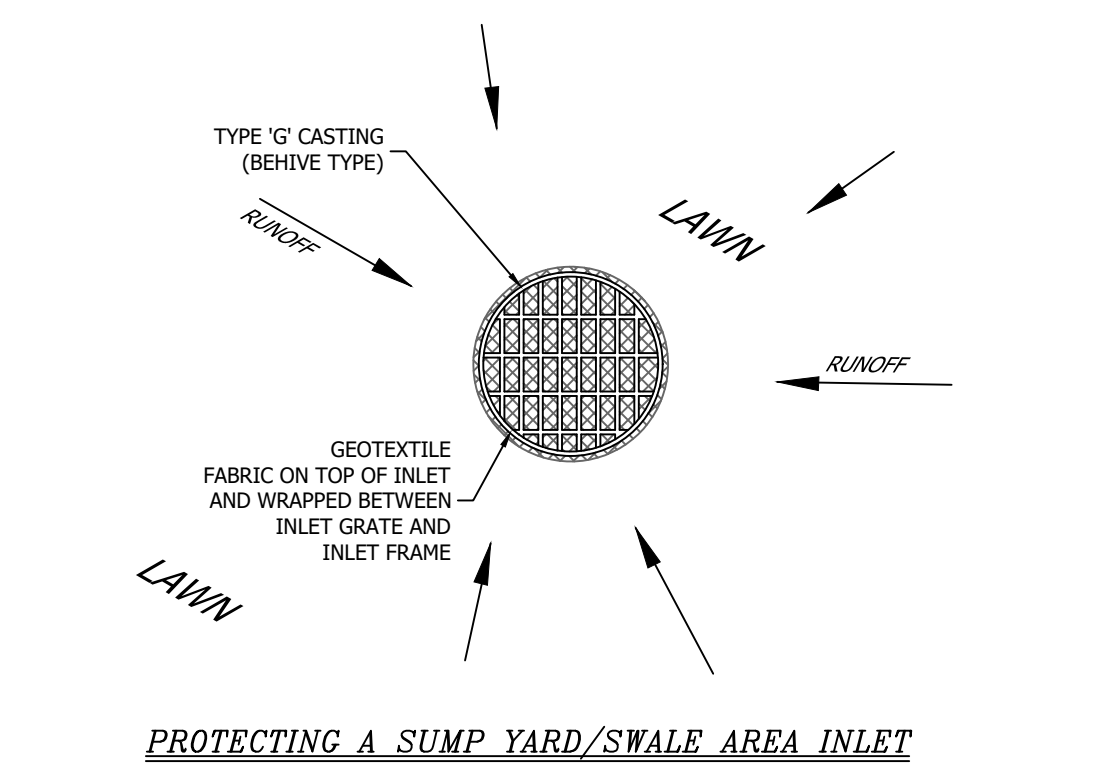
Table RECP-1. ECTC Standard Specification for Temporary Rolled Erosion Control Products
(Adapted from Erosion Control Technology Council 2005)

Product Description	Slope Applications*		Channel Applications*	Minimum Tensile Strength ¹	Expected Longevity
	Maximum Gradient	C Factor ^{2,5}			
Mulch Control Nets	5:1 (H:V)	≤0.10 @ 5:1	Max. Shear Stress ^{3,4,6} 0.25 lbs/ft ² (12 Pa)	5 lbs/ft (0.073 kN/m)	Up to 12 months
Netless Rolled Erosion Control Blankets	4:1 (H:V)	≤0.10 @ 4:1	0.5 lbs/ft ² (24 Pa)	5 lbs/ft (0.073 kN/m)	
Single-net Erosion Control Blankets & Open Weave Textiles	3:1 (H:V)	≤0.15 @ 3:1	1.5 lbs/ft ² (72 Pa)	50 lbs/ft (0.73 kN/m)	
Double-net Erosion Control Blankets	2:1 (H:V)	≤0.20 @ 2:1	1.75 lbs/ft ² (84 Pa)	75 lbs/ft (1.09 kN/m)	24 months
Mulch Control Nets	5:1 (H:V)	≤0.10 @ 5:1	0.25 lbs/ft ² (12 Pa)	25 lbs/ft (0.36 kN/m)	
Erosion Control Blankets & Open Weave Textiles (slowly degrading)	1.5:1 (H:V)	≤0.25 @ 1.5:1	2.00 lbs/ft ² (96 Pa)	100 lbs/ft (1.45 kN/m)	24 months
Erosion Control Blankets & Open Weave Textiles	1:1 (H:V)	≤0.25 @ 1:1	2.25 lbs/ft ² (108 Pa)	125 lbs/ft (1.82 kN/m)	36 months

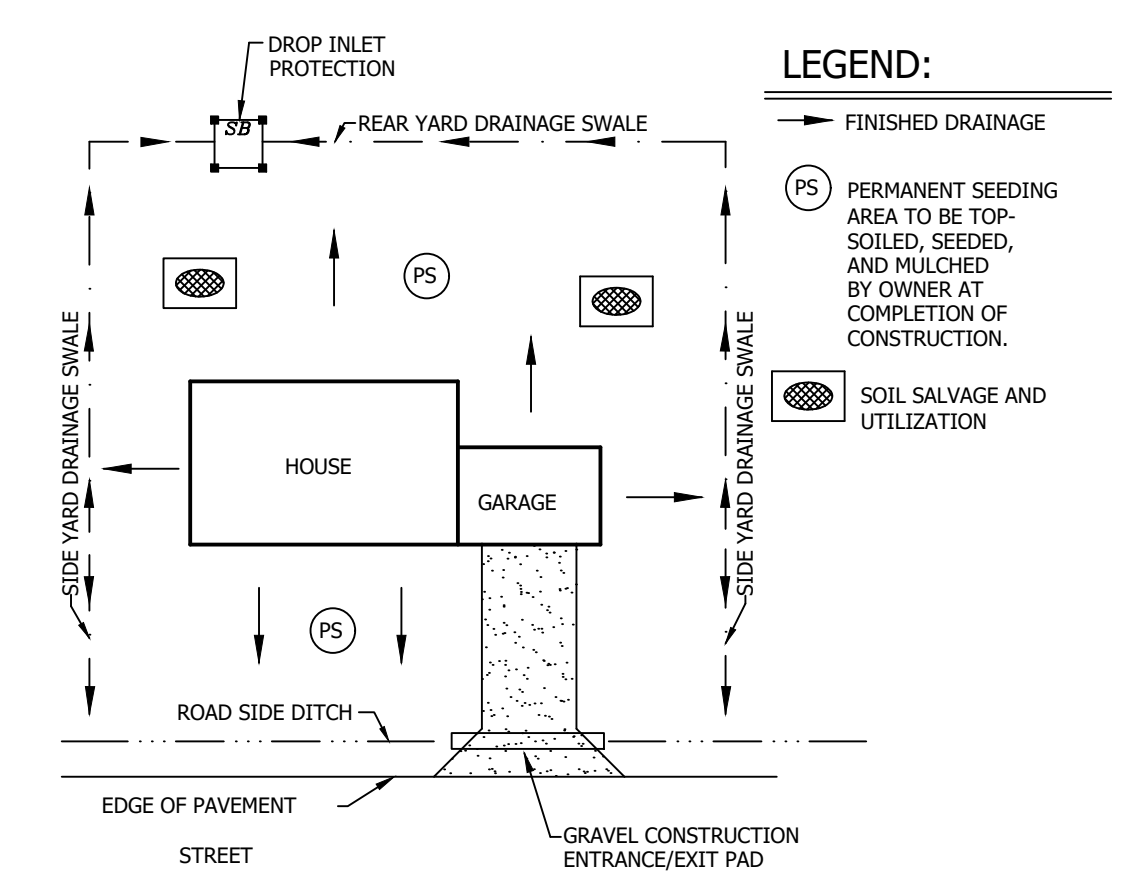
EROSION CONTROL BLANKET REQUIREMENTS
DETAIL NOT TO SCALE



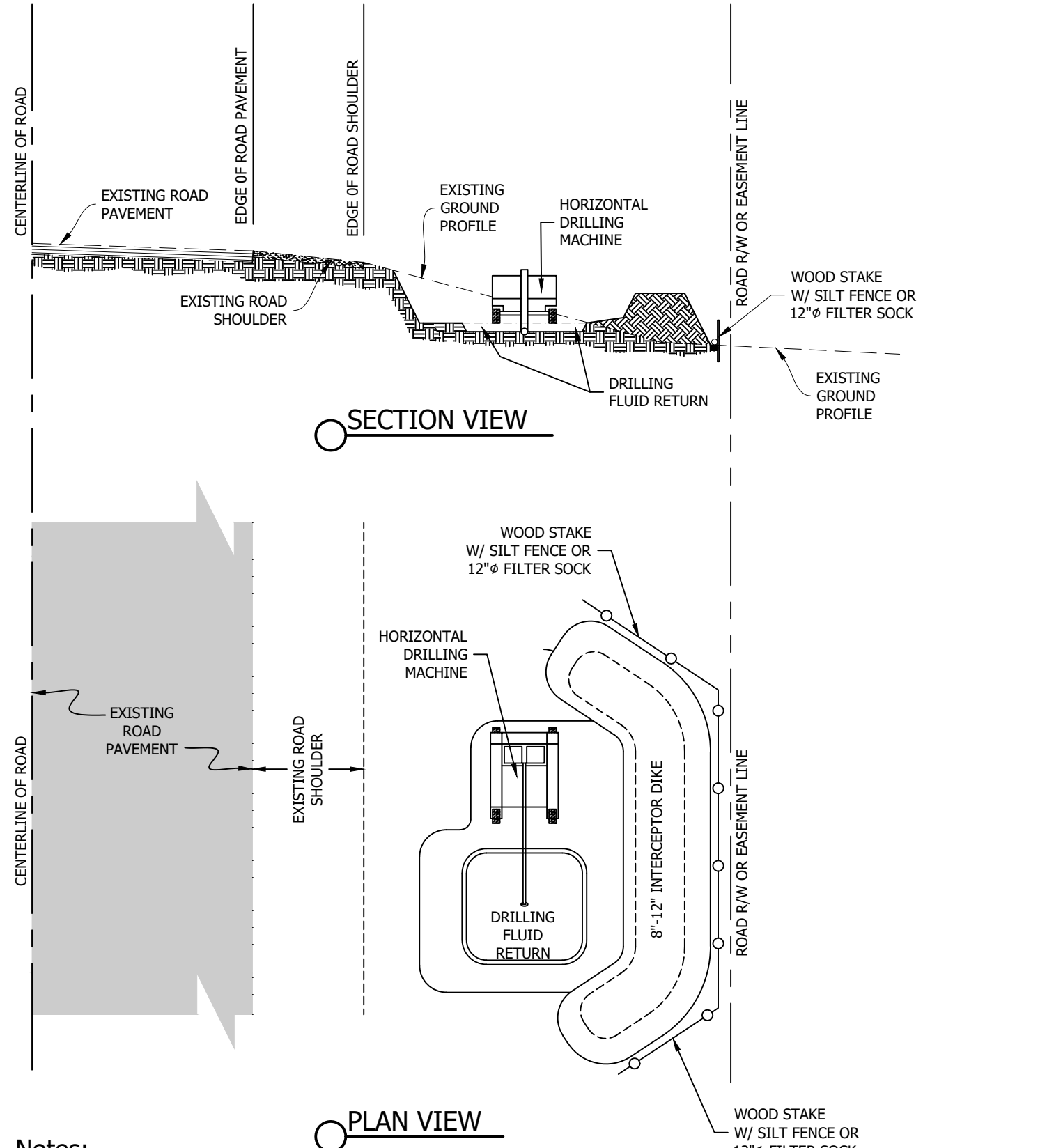
EROSION CONTROL BLANKET STAPLE PATTERNS
DETAIL NOT TO SCALE



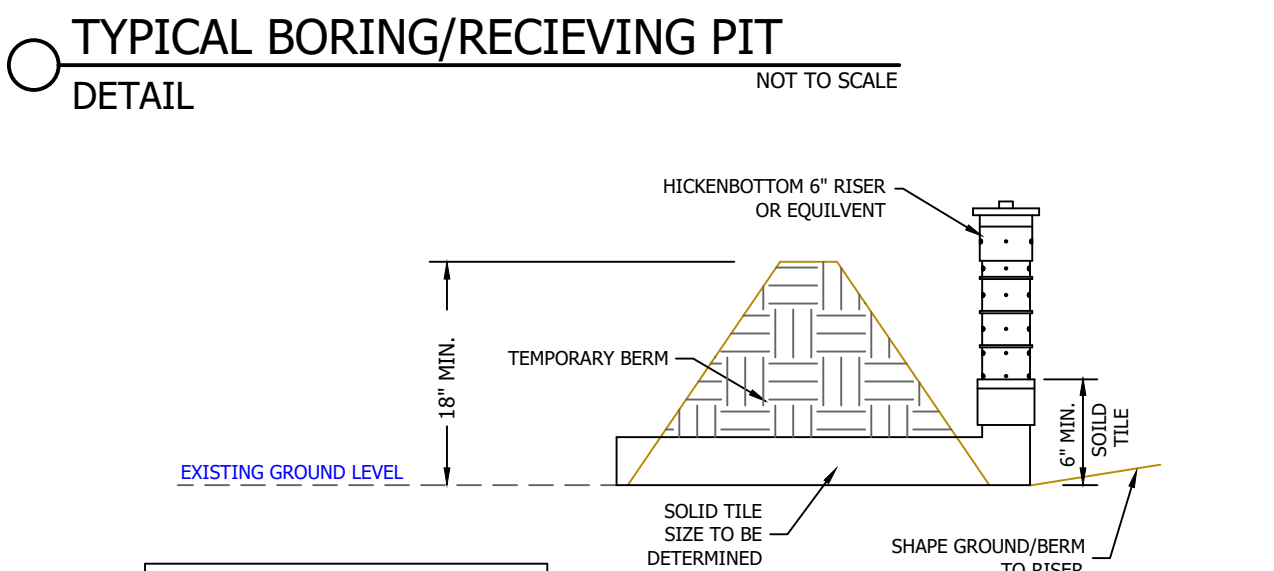
(BEEHIVE) CASTING SEDIMENT BARRIER
DETAIL NOT TO SCALE



TYPICAL EROSION/SEDIMENT CONTROL PLAN FOR A TYPICAL DWELLING WITH SEWER TAP CONNECTION
DETAIL NOT TO SCALE



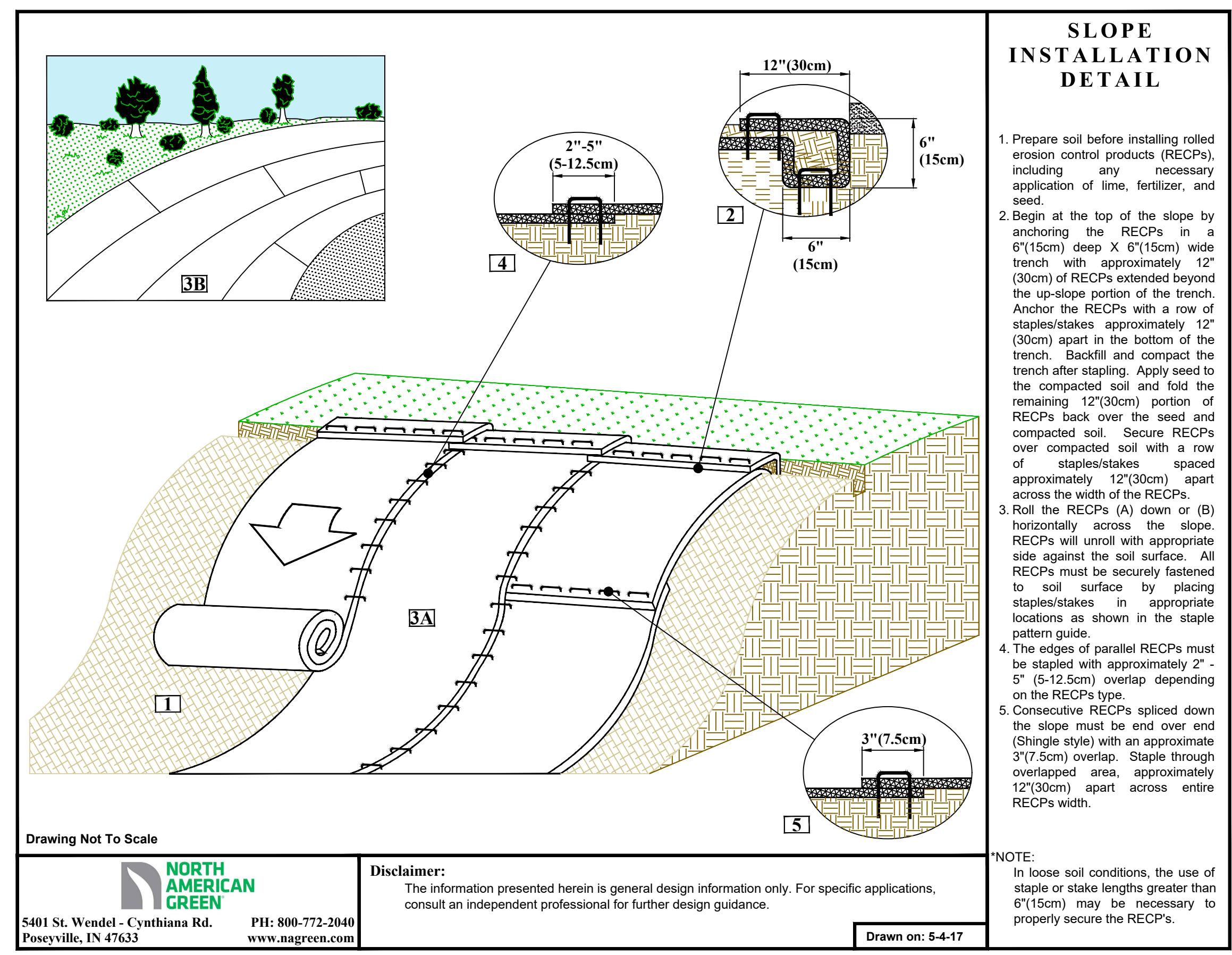
- Notes:**
- Construct interceptor dikes where needed. This may require leaving dikes used for temporary measures or the installation of additional ones.
 - Fertilize and lime slopes as needed.
 - Drilling fluid to be removed and disposed of by contractor.
 - All excavation for creation of drilling/receiving pits and/or interceptor dike shall be used to fill the excavated areas to their original grade. Area to be seeded or mulched after completed grading.
 - Select seed appropriate for the season of construction and the area. A mixture of seeds (two to five species) is best.
 - On slopes where vegetative stabilization alone is insufficient, employ nonvegetative stabilization (e.g. mulching). Extremely steep slopes may require matting with staling or lining with more durable materials (e.g. bags of quickcrete).
 - Put sediment barriers such as hay bales, fabric fence or a combination of these where drains and ditches allow sediment to enter the waterway or wetland.
 - If necessary stabilize the stream banks. Place appropriate materials such as riprap or stapled matting when excessive stream velocities may be encountered.
 - Remove temporary structures which are not necessary and are not biodegradable. Silt fences installed across a stream downstream of the work site would be an example.
 - Be prepared to monitor and maintain erosion control measures until stabilization of the area has been accomplished satisfactorily.



PIPE SIZE FOR TEMPORARY SLOPE DRAIN

MAX. DRAINAGE AREA PER PIPE	MIN. PIPE DIAMETER
0.5 ACRE	8 IN.
0.75 ACRE	10 IN.
1.0 ACRE	12 IN.
GREATER THAN 1.0 ACRE	INDIVIDUALLY DESIGNED

NOTE: THIS SEDIMENT CONTROL PRACTICE MAY BE USED IN LIEU OF SILT FENCE IN SOME APPLICATIONS. CONTACT DEKALB COUNTY S.W.C.O. FOR SPECIFIC APPLICATION PRACTICES

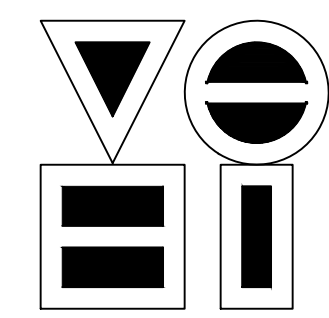


Disclaimer:
The information presented herein is general design information only. For specific applications, consult an independent professional for further design guidance.

NOTE:
In loose soil conditions, the use of staple or stake lengths greater than 6\"/>

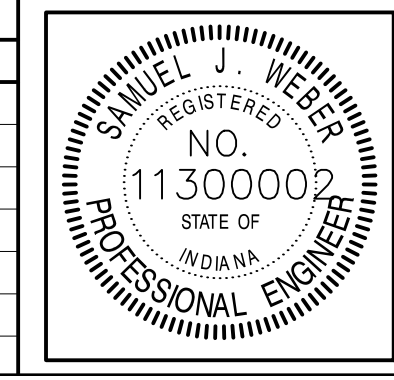
NOT ALL OF THE EROSION CONTROL PRACTICES SHOWN ARE CALLED FOR IN THESE PLANS. THE ADDITIONAL EROSION CONTROL PRACTICES ARE SOLUTIONS TO POSSIBLE EROSION CONTROL PROBLEMS

DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\3-Erosion Control
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 DIMSCALE: 20 LTSCALE: 0.5
 PLOTTED BY: jmovery
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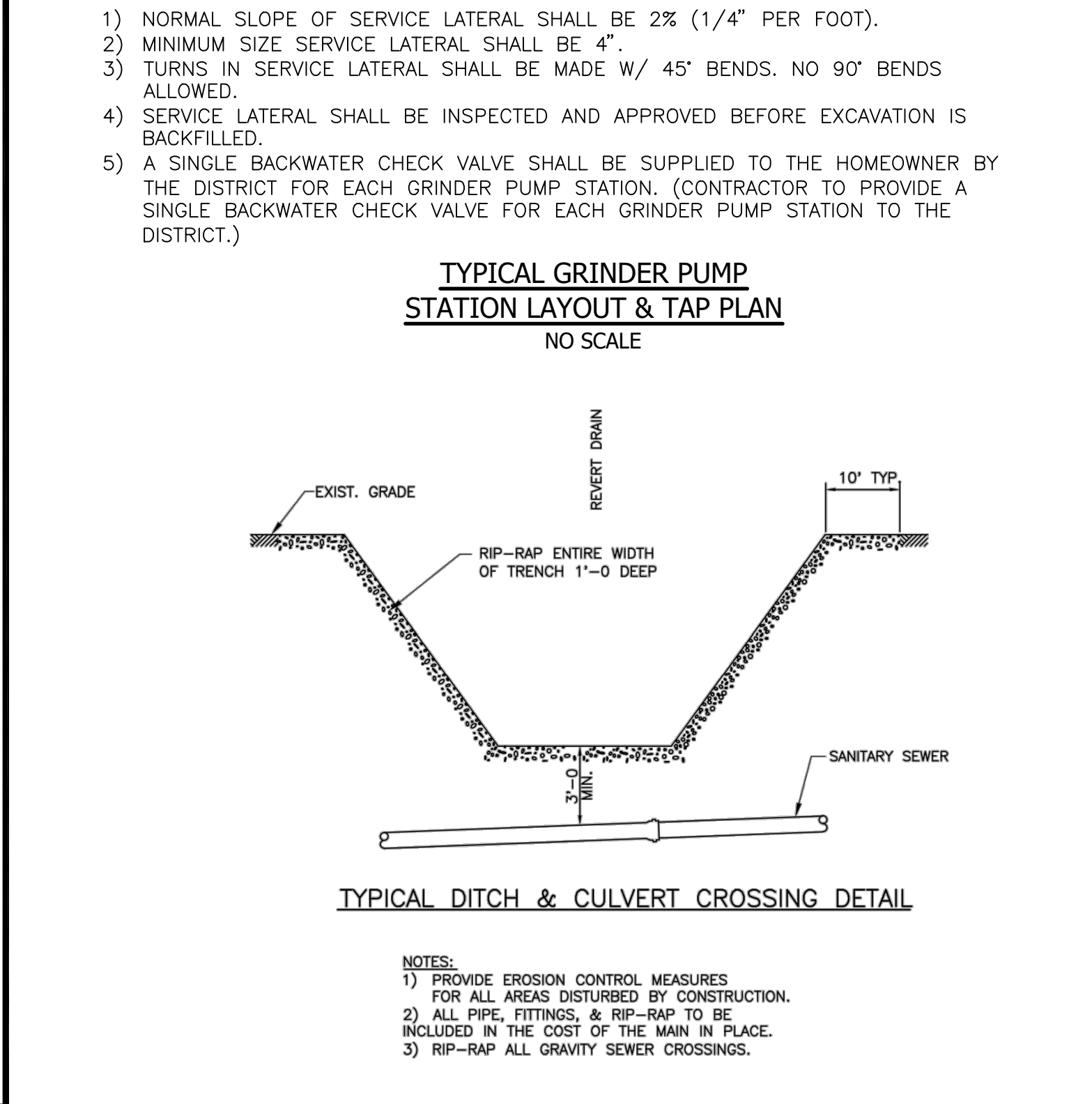
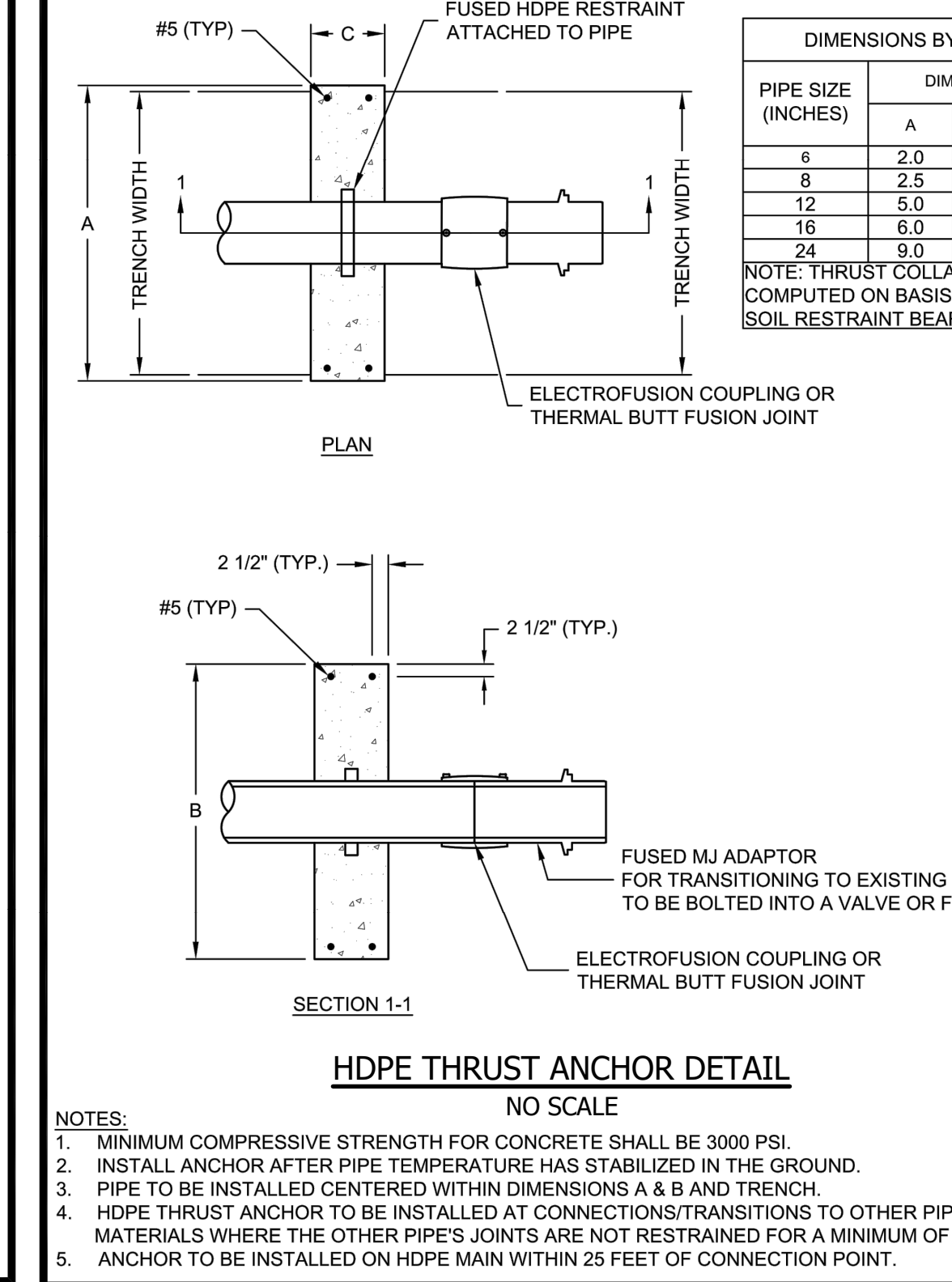
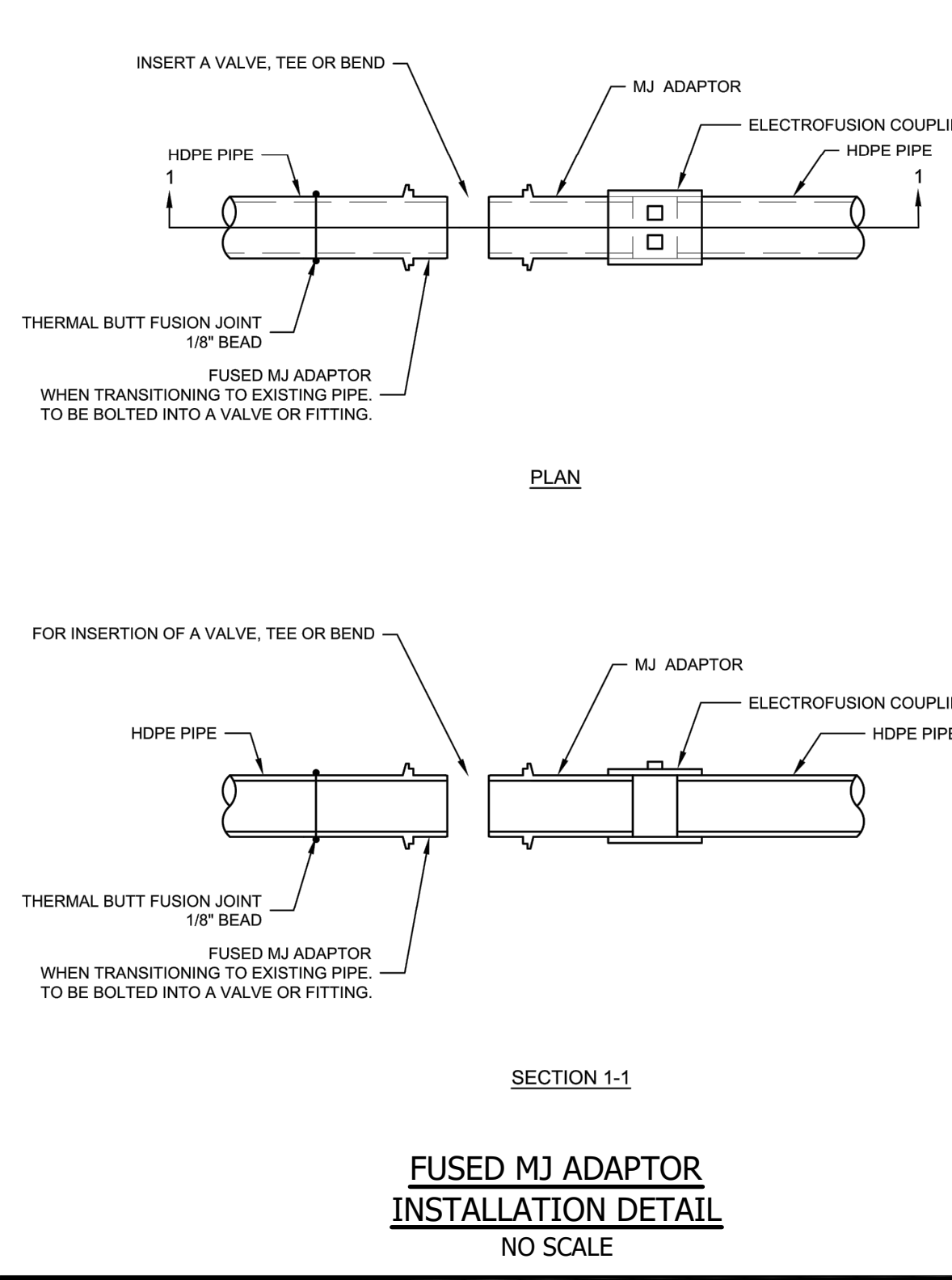
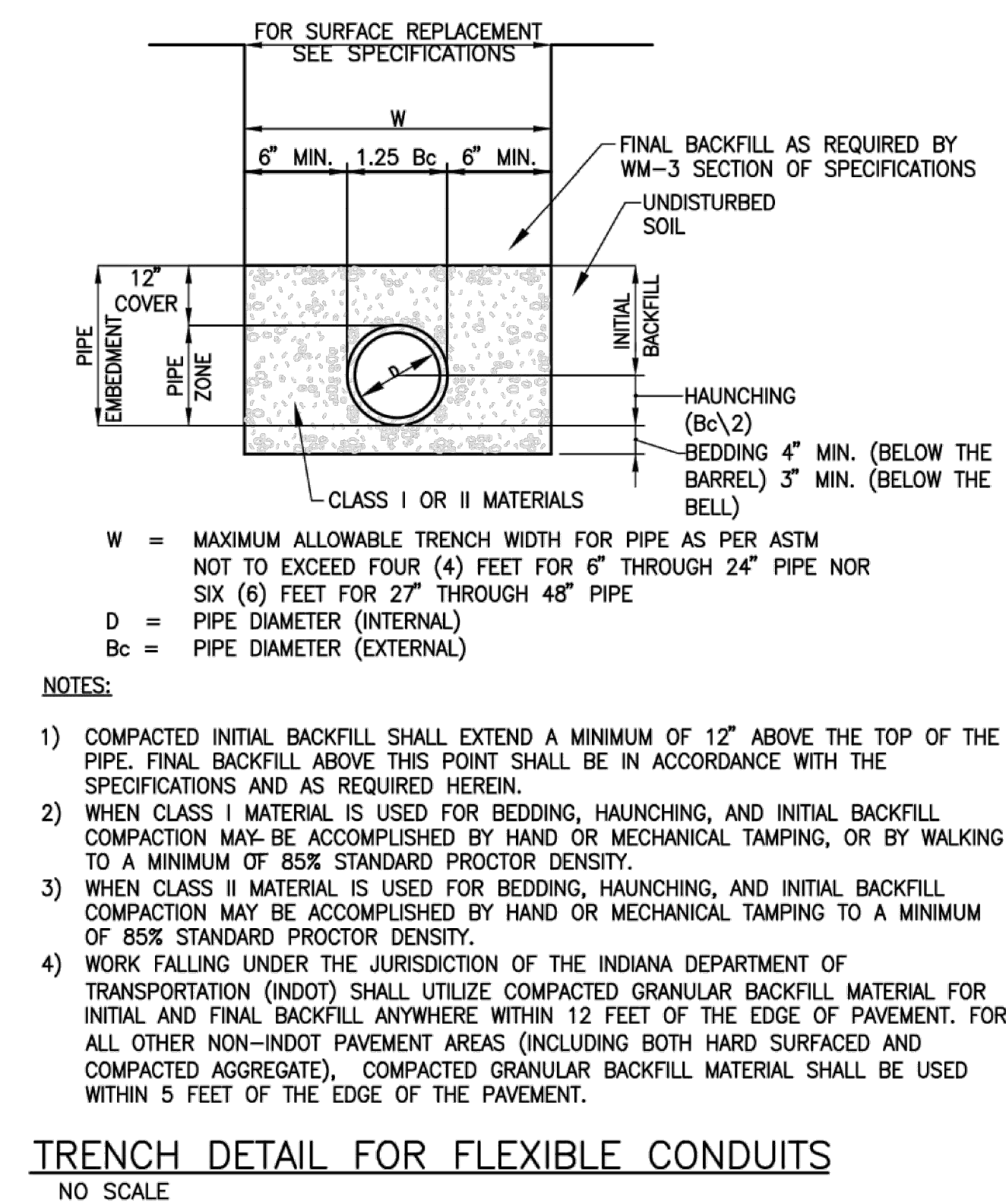
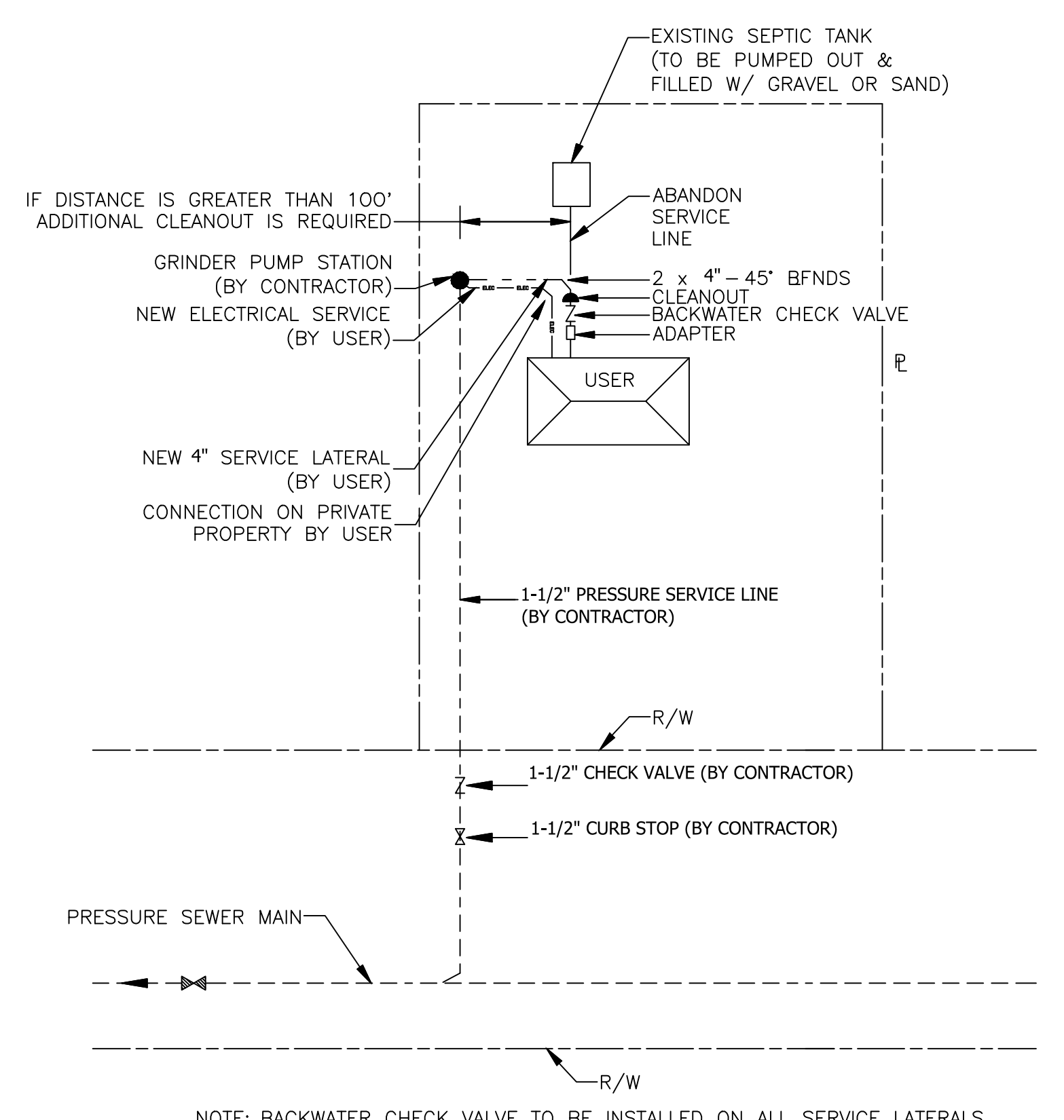
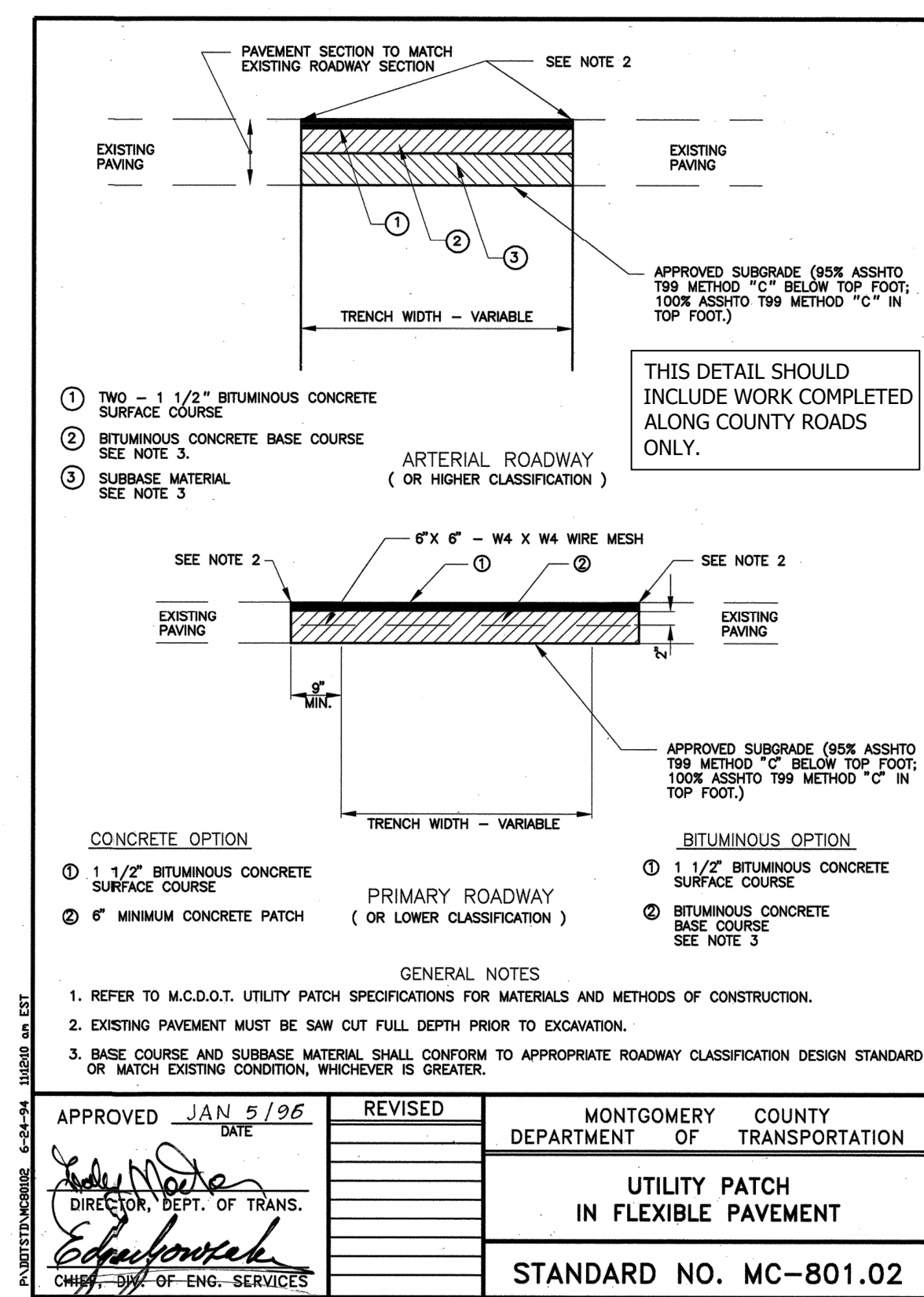
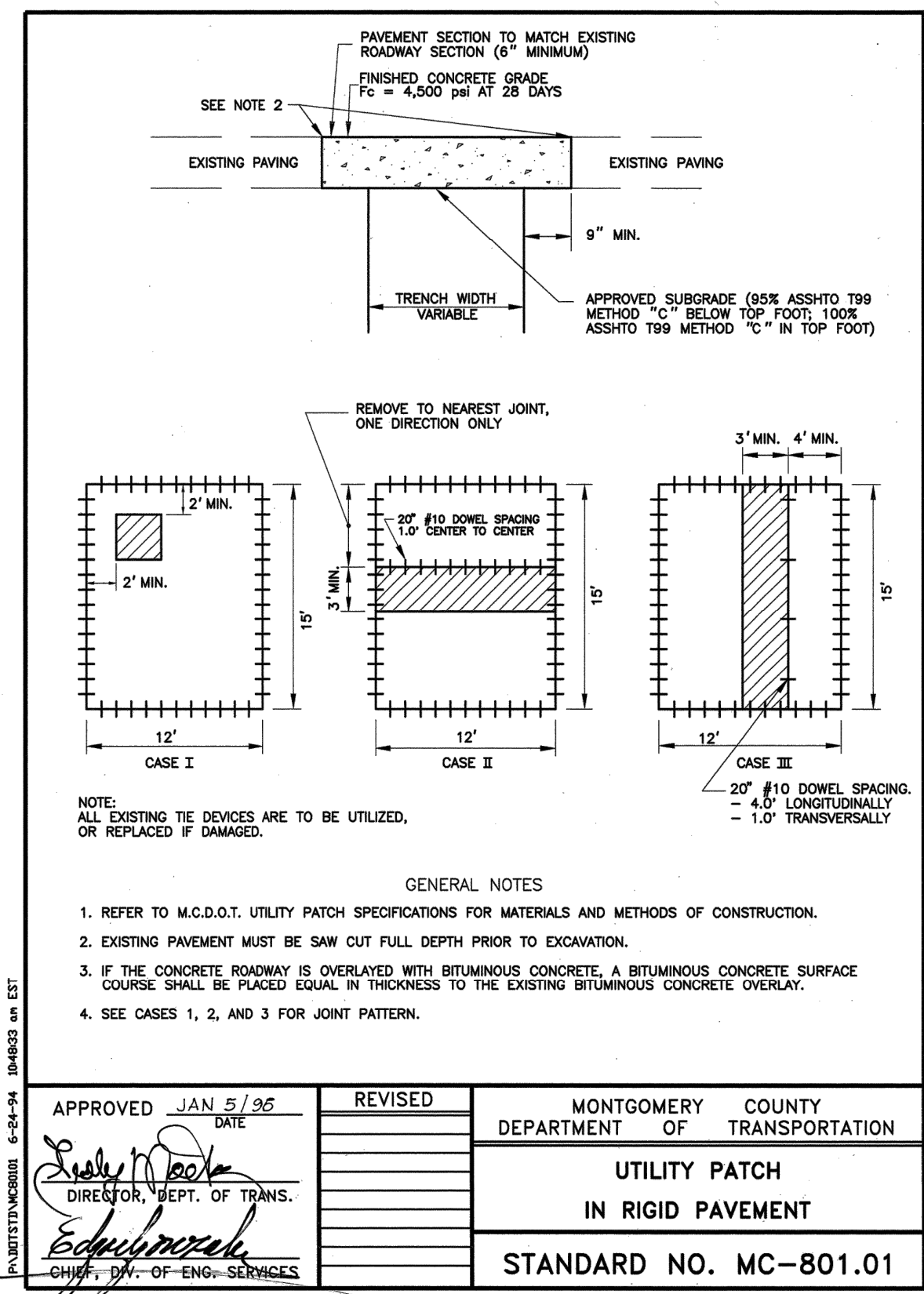
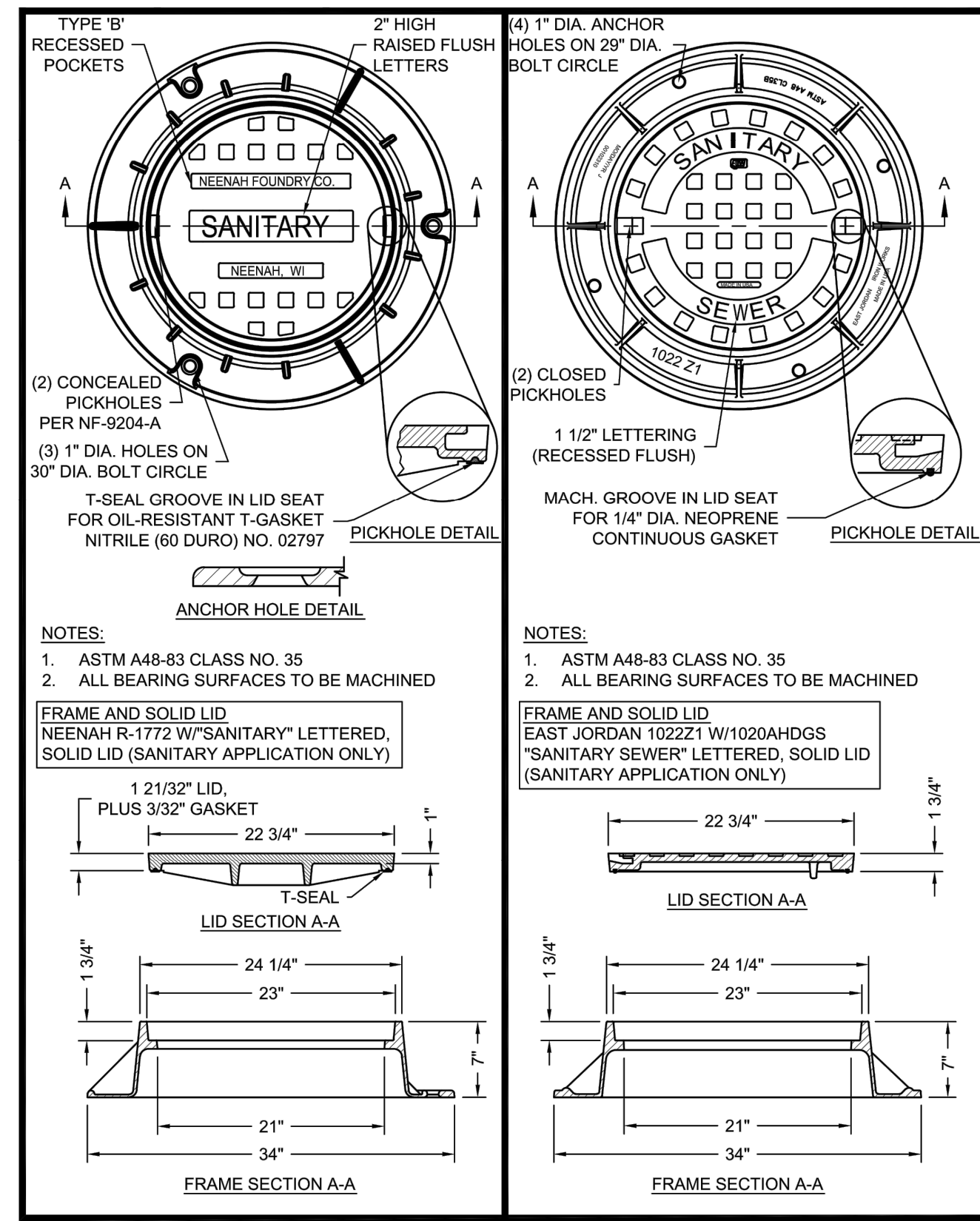


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CHECKED:	SJW	CHECKED:

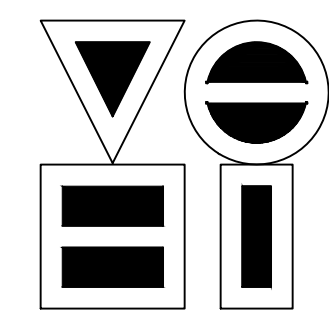
S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

STORM WATER POLLUTION PREVENTION & EROSION CONTROL DETAILS

HORIZONTAL SCALE	AS NOTED
VERTICAL SCALE	AS NOTED
SHEETS	103 of 126
PROJECT	15-3371

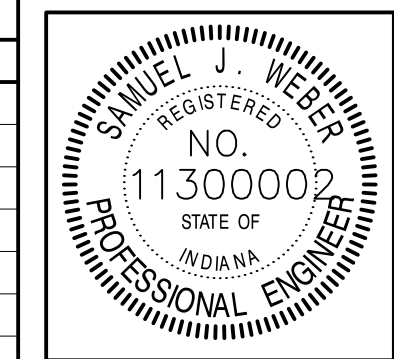


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 PLOTTED BY: jmooney
 DATE: Jun 06, 2018 - 7:08pm



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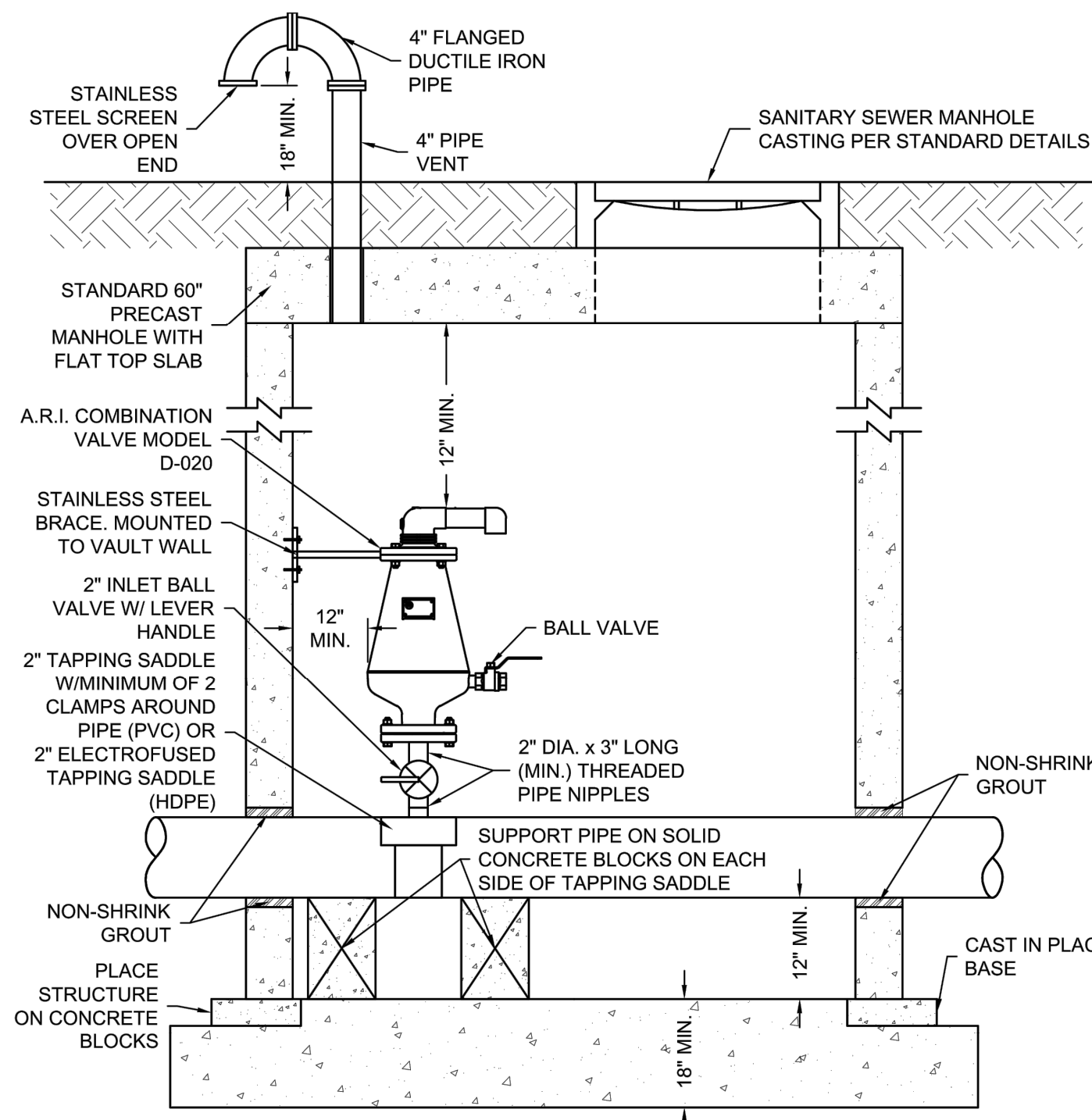
RECOMMENDED FOR APPROVAL
 DESIGN ENGINEER
 DATE: 06/07/18

DESIGNED: KDK
 DRAWN: KDK
 CHECKED: SJW
 CHECKED: SJW

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

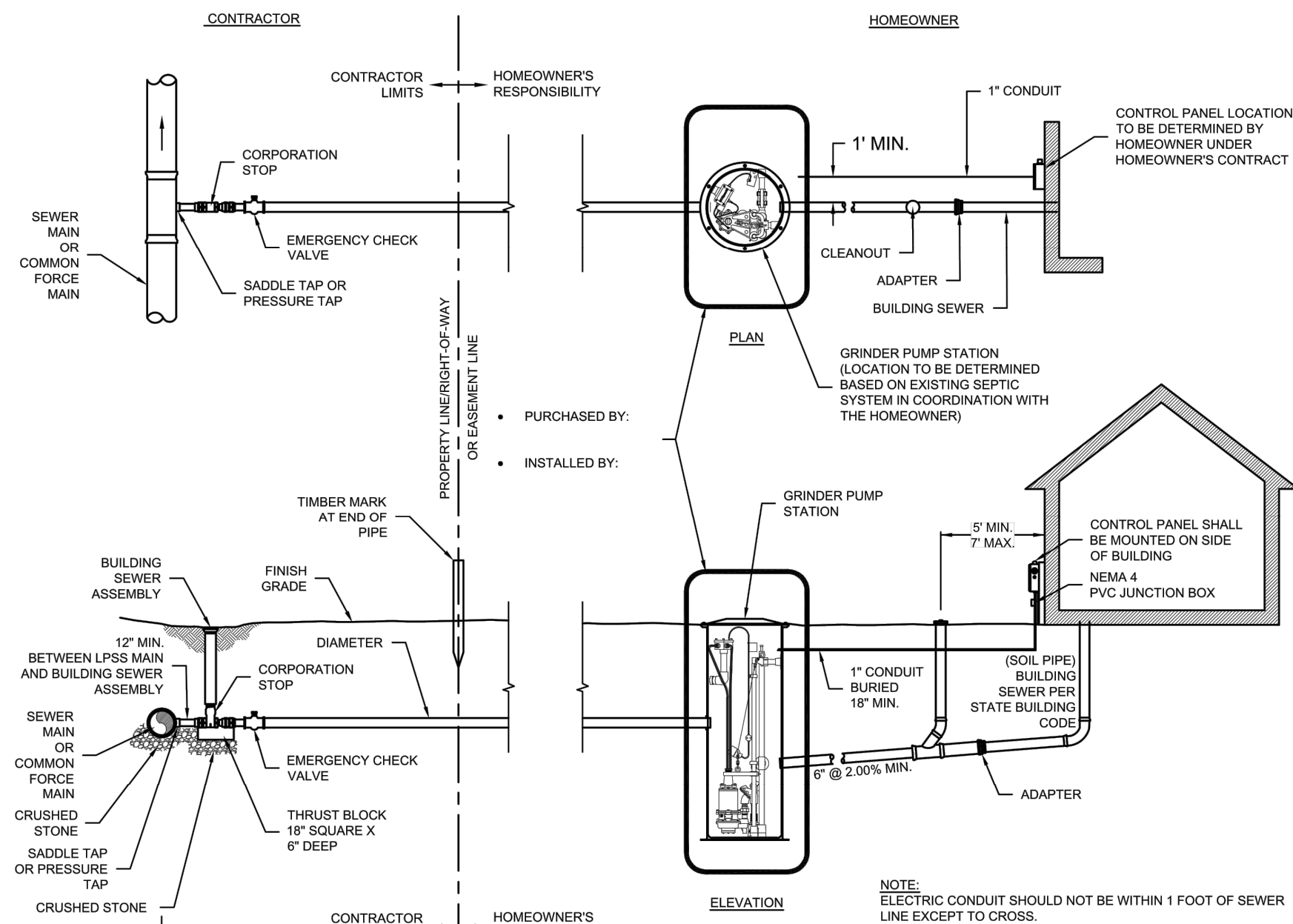
MISCELLANEOUS DETAILS

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VERTICAL SCALE	AS NOTED
SHEETS	104 of 126
PROJECT	15-3371

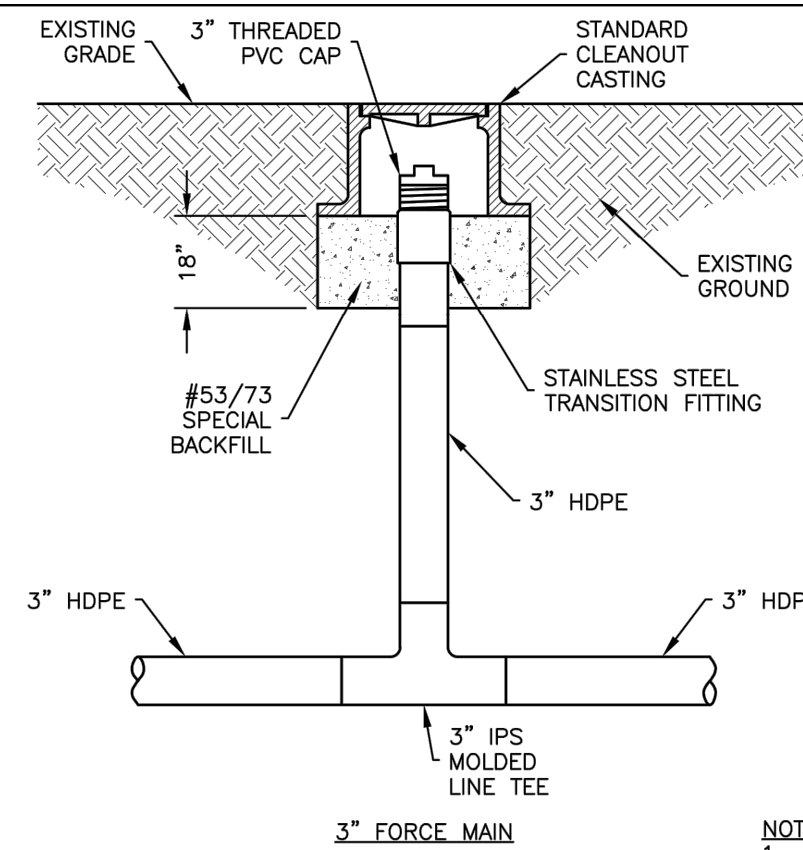


- NOTES:**
1. CONTRACTOR SHALL BE RESPONSIBLE FOR BRACING VALVE TO PREVENT ANY TYPE OF MOVEMENT.
 2. CONTRACTOR SHALL INSTALL COMBINATION VALVE OFFSET FROM CENTER OF STRUCTURE AND ON OPPOSITE SIDE OF MANHOLE ACCESS TO PROVIDE UNIMPEDED ACCESS TO STRUCTURE.
 3. WEIGHT OF COMBINATION VALVE SHALL NOT BE SUPPORTED BY THE FORCE MAIN PIPE.
 4. PROJECT ENGINEER SHALL PROVIDE VALVE MODEL AND SIZE.
 5. MINIMUM CLEARANCE OF STRUCTURE SHALL BE 6 FT. FROM TOP OF STONE BASE TO STRUCTURE CEILING.
 6. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONTROLLING MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES FOR CONSTRUCTION AND IS THEREFORE RESPONSIBLE FOR CONTROLLING THE QUALITY OF WORK.

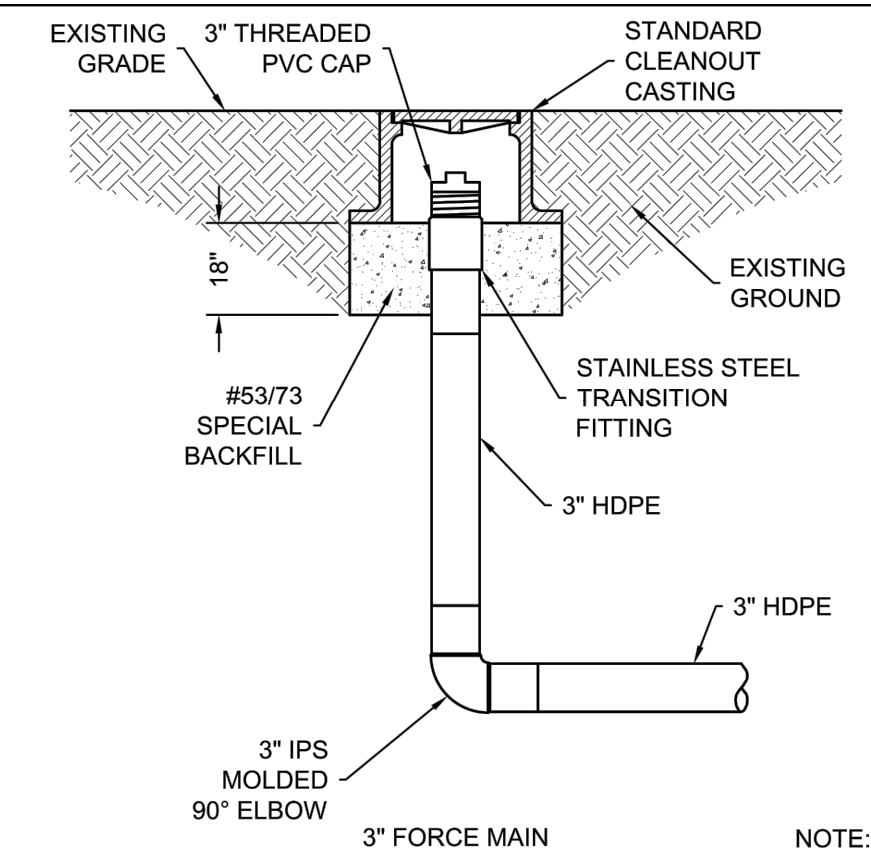
AIR RELEASE STRUCTURE
NO SCALE



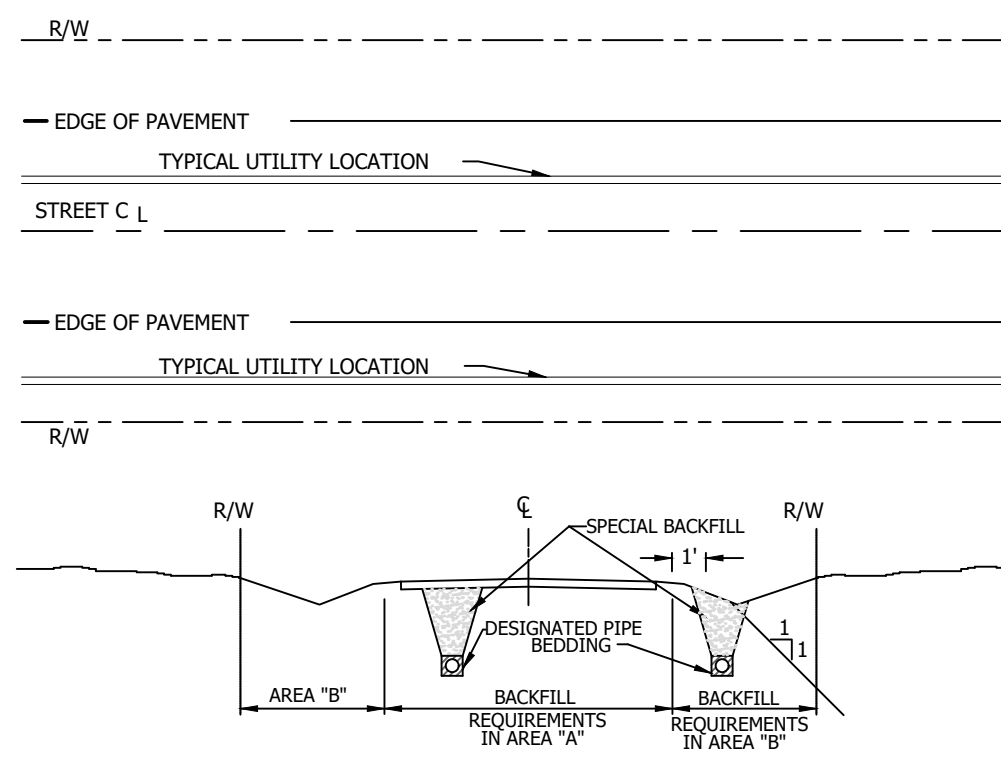
GRINDER PUMP STATION AND PRESSURE BUILDING SEWER INSTALLATION
NO SCALE



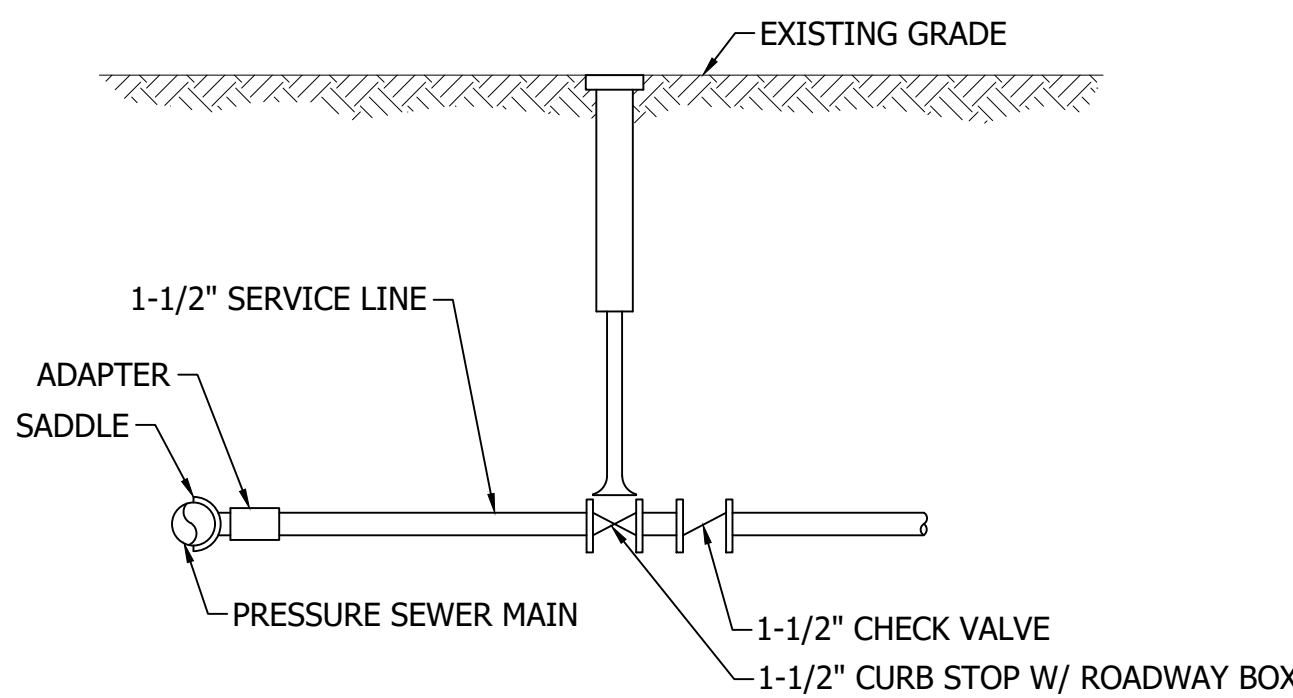
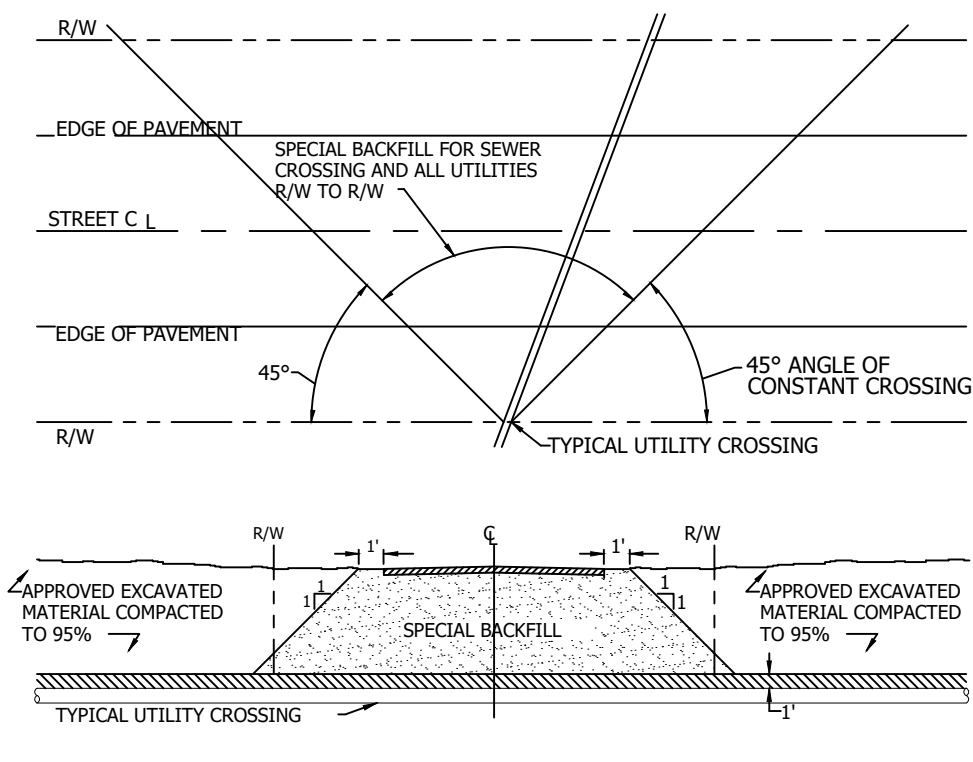
LOW PRESSURE FORCE MAIN IN-LINE CLEANOUT
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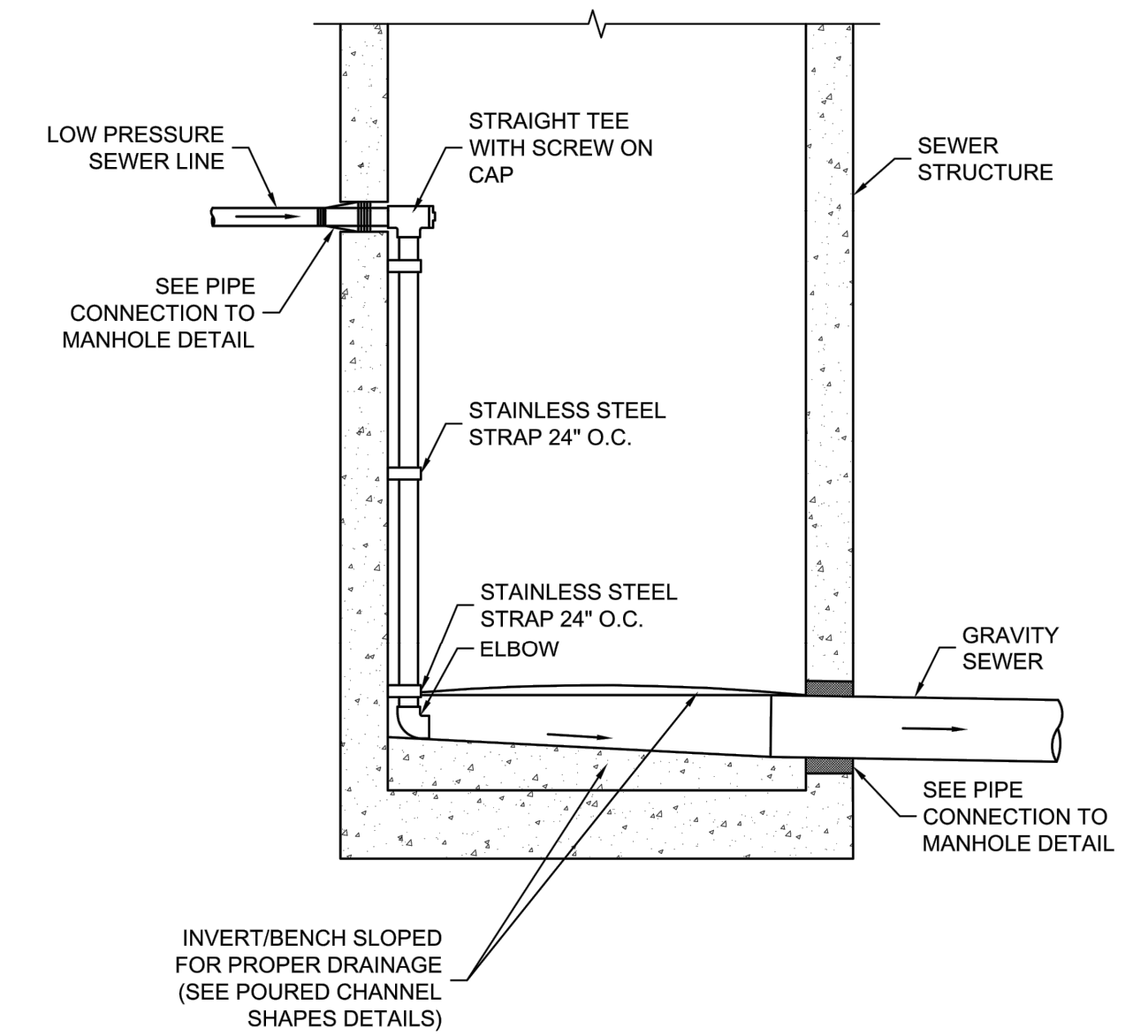
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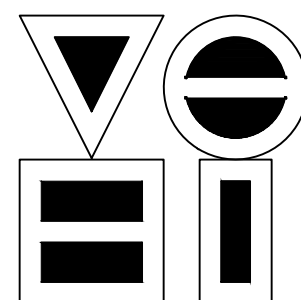
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PRESSURE SERVICE CONNECTION DETAIL
NO SCALE



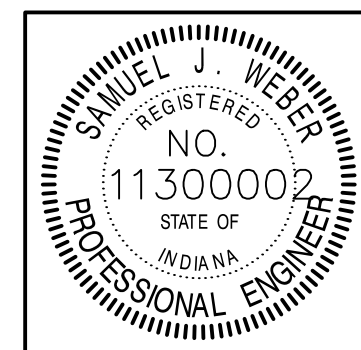
LOW PRESSURE FORCE MAIN DISCHARGE CONNECTION
NO SCALE



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RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
	DESIGN ENGINEER	DATE
DESIGNED: KDK	DRAWN: KDK	
CHECKED: SJW	CHECKED: SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

MISCELLANEOUS DETAILS

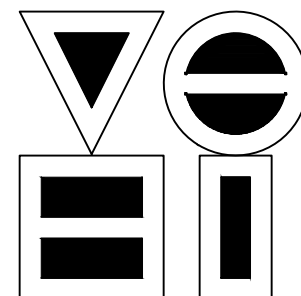
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VERTICAL SCALE	AS NOTED
SHEETS	105 of 126
PROJECT	15-3371

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 DATE: Jun 06, 2018 - 7:09pm

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 FILE: 15-3371 Details.dwg
 DIMSCALE: 1/8" = 1'-0"
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 7:09pm

Lateral Number	Property Address	Property Owner	Connects into	Lateral Size (in)	Quantity of GPS Installations	Required Installation Method	Decommission Septic System	Property FFE (ft)*
1	4076 E US Hwy 136	Louis & Angela Hatke	FM-1	1.25"	1	Trenchless	Yes	790
2	1423 S Nucor Rd	Dennis & Jacquelyn Rash	FM-1	1.25"	1	Open-cut	Yes	827
3	2969 E SR 32	Dale & Kathryn Kunkel	LPS-2	1.25"	1	Open-cut	Yes	782
4	2787 E SR 32	Thomas Richardson	LPS-2	1.25"	1	Open-cut	Yes	780
5	4035 E SR 32	JTR Enterprises LLC**	SAN-3	6"	0	Open-cut	Yes	819
6	4020 E Windwood Lane	Andrew & Cali Bridges	LPS-3	1.25"	1	Open-cut	Yes	818
7	4060 E SR 32	Rodney & Patricia Siddons	SAN-3	1.25"	1	Trenchless	Yes	815
8	3832 E SR 32	Clyde Coleman	FM-2	1.25"	1	Trenchless	Yes	785
9	3836 E SR 32	Georgiann Coleman	FM-2	1.25"	1	Trenchless	Yes	804
10	3837 E SR 32	John & Mary Kelch	FM-2	1.25"	1	Open-cut	Yes	813
11	265 N 400 E	William & Sally Chamness	LPS-1	1.25"	1	Open-cut	Yes	820
12	4069 N Windwood Lane	William & Sally Chamness	LPS-3	1.25"	1	Open-cut	Yes	822
13	4040 E SR 32	Frank Sorrentino & Donald Boatright**	SAN-3	1.25"	1	Trenchless	Yes	810
14	3384 E SR 32	Morrison Enterprises LLC	FM-2	1.25"	1	Trenchless	Yes	792
15	165 N 400 E	Brian & Ella Swick	LPS-1	1.25"	1	Open-cut	Yes	817
16	3674 E SR 32	Lindsay Williamson**	FM-2	1.25"	1	Trenchless	Yes	800
17	180 N 400 E	Charles Quigg	LPS-1	1.25"	1	Trenchless	Yes	821
18	4080 E Windwood Lane	Larry & Sherry Allen	LPS-3	1.25"	1	Open-cut	Yes	821
19	3450 E SR 32	Conice LLC	FM-2	1.25"	1	Trenchless	Yes	789
20	1261 S Nucor Rd	Dennis & Janet Halford	FM-1	1.25"	1	Open-cut	Yes	807
21	3975 E SR 32	Charles & Shirley Akers	FM-2	1.25"	1	Open-cut	Yes	815
22	3949 E SR 32	Charles & Shirley Akers	FM-2	1.25"	1	Open-cut	Yes	810
23	453 N 400 E	Smartsburg Christian Church**	LPS-1	1.25"	1	Open-cut	Yes	818
24	223 N 400 E	Stephen & Janice Snyder**	LPS-1	1.25"	1	Open-cut	Yes	818
25	4365 E SR 32	Sixberry Services LLC	SAN-2	6"	0	Open-cut	Yes	809
26	4365 E SR 32	Sixberry Services LLC	SAN-2	6"	0	Open-cut	Yes	806
27	3610 E SR 32	Jeffery & Kathryn Brooks	FM-2	1.25"	1	Trenchless	Yes	797
28	2885 E SR 32	Ronald Shipman	LPS-2	1.25"	1	Open-cut	Yes	784
29	232 N 400 E	Ron & Cheryl Sabens	LPS-1	1.25"	1	Trenchless	Yes	819
30	29 N 400 E	Sean & Angela Brown	FM-1	1.25"	1	Open-cut	Yes	825
31	130 N 400 E	Daniel & Catherine Mathews	LPS-1	1.25"	1	Trenchless	Yes	823
32	53 N 400 E	Stephen & Janice Snyder**	FM-1	1.25"	1	Open-cut	Yes	824
33	2975 E SR 32	David & Victoria Reynolds	LPS-2	1.25"	1	Open-cut	Yes	785
34	3694 E SR 32	Chris Keller	FM-2	1.25"	1	Trenchless	Yes	797
35	869 Nucor Rd	Richard & Kathryn Dockins	FM-1	1.25"	1	Open-cut	Yes	827
36	Lot 2 Windwood Subdivis	Joshua & Kelsie Sarver	LPS-3	1.25"	1	Open-cut	Yes	813
37	827 S Nucor Rd	Ashen & Jenny Kixmiller	FM-1	1.25"	1	Open-cut	Yes	833
38	3994 E SR 32	Harold & Judy Roy	FM-2	1.25"	1	Trenchless	Yes	815
39	4105 E SR 32	Raoul & Laurel Moore	SAN-3	6"	0	Open-cut	Yes	818
40	3414 E SR 32	Mary Ann Meek C/O CNR Enterprises L	FM-2	1.25"	1	Trenchless	Yes	785
41	3410 E SR 32	Mary Ann Meek C/O CNR Enterprises L	FM-2	1.25"	1	Trenchless	Yes	792
42	2801 E SR 32	Gary & Marcia Caldwell	LPS-2	1.25"	1	Open-cut	Yes	780
43	3580 E SR 32	Delbert Cedars	FM-2	1.25"	1	Trenchless	Yes	794
44	343 N 400 E	Stephen & Connie Henderson	LPS-1	1.25"	1	Open-cut	Yes	820
45	3370 E SR 32	Suprb Enterprise LLC **	FM-2	1.25"	1	Trenchless	Yes	794
46	20 N 400 E	Richard & Nicole Haley	FM-1	1.25"	1	Trenchless	Yes	828
47	3839 E SR 32	Brody & Lauran Nichols**	FM-2	1.25"	1	Open-cut	Yes	810
48	306 N 400 E	Willis & Janice Smith	LPS-1	1.25"	1	Trenchless	Yes	820
49	3350 E SR 32	Irving Materials Inc	FM-2	1.25"	1	Trenchless	Yes	787
50	4312 E SR 32	Homer & Latricia Dowell	SAN-3	6"	0	Open-cut	Yes	796
51	540 N 425 E	Ethan & Courtney Myers**	SAN-3	6"	0	Open-cut	Yes	787

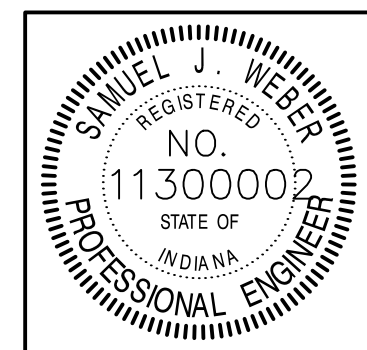
*Property Finished Floor Elevations (FFE) were established using publicly available GIS information and not topographic survey. Contact your local utility for verification of FFE's and feasibility and profile of all service laterals. Contractor shall be responsible for coordination with each property owner for preferred sewer lateral location along the right-of-way frontage owned by each property owner. This cost shall be included in the contract.



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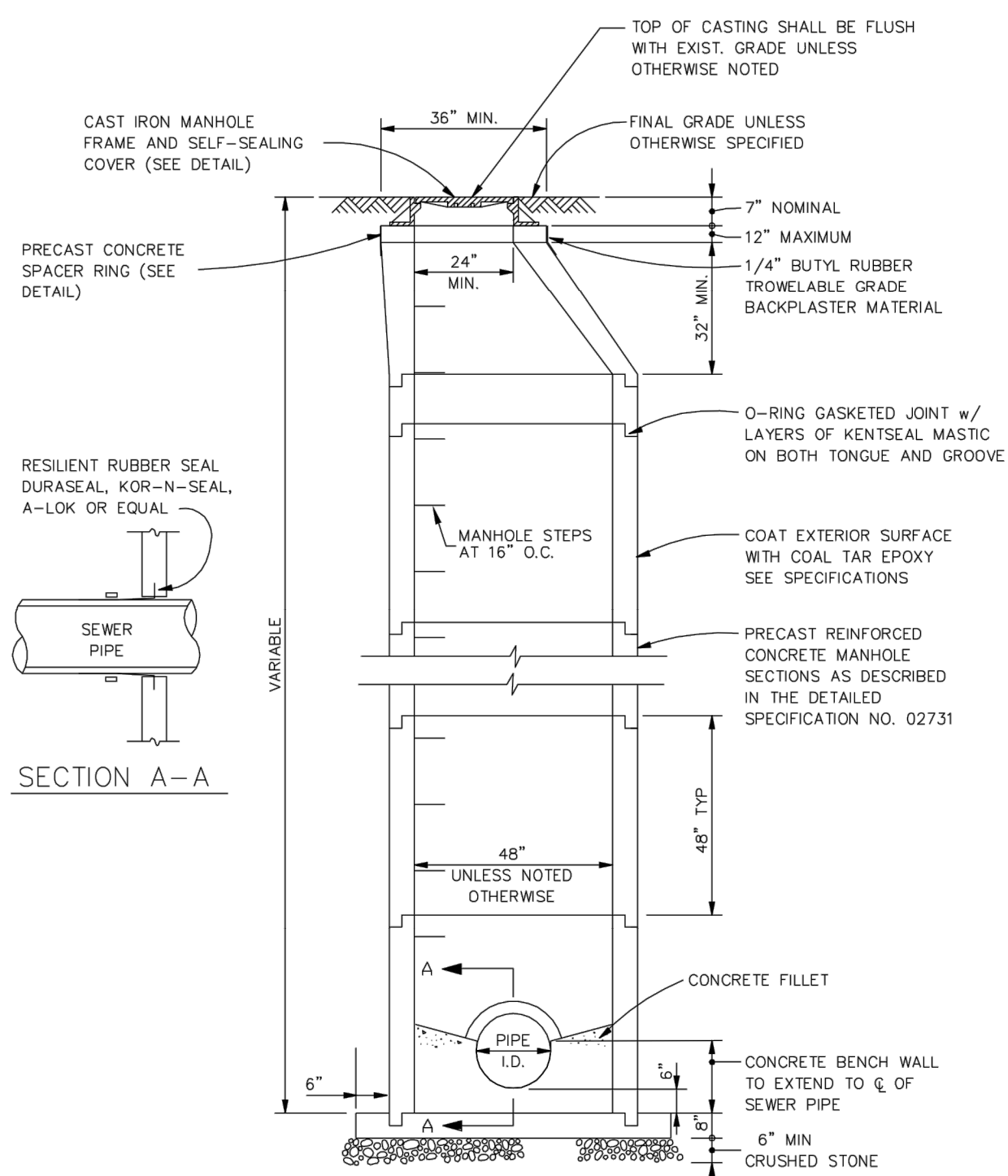


RECOMMENDED FOR APPROVAL		06/07/18
	DESIGN ENGINEER	DATE
DESIGNED: KDK	DRAWN: KDK	
CHECKED: SJW	CHECKED: SJW	

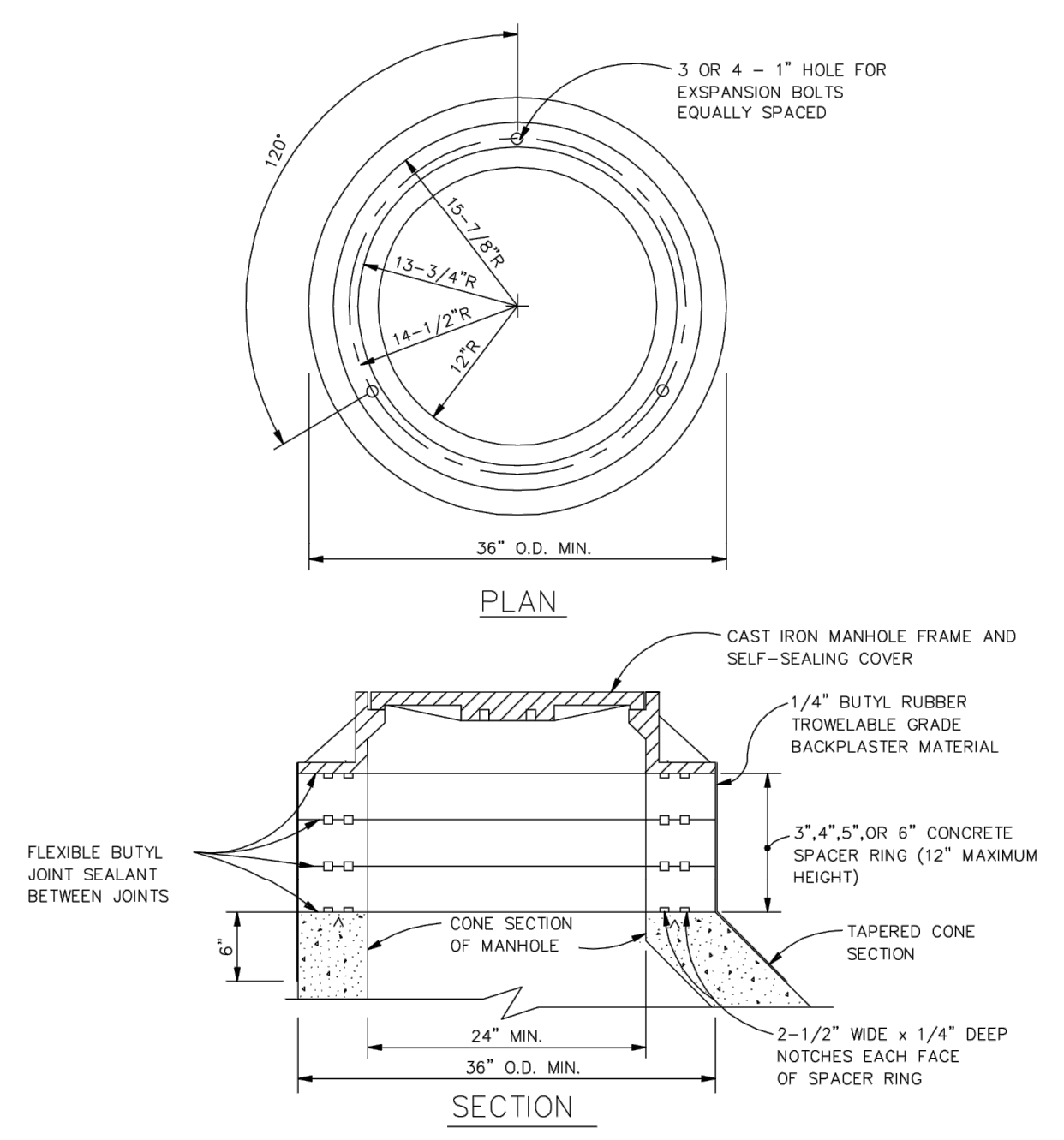
S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

MISCELLANEOUS DETAILS

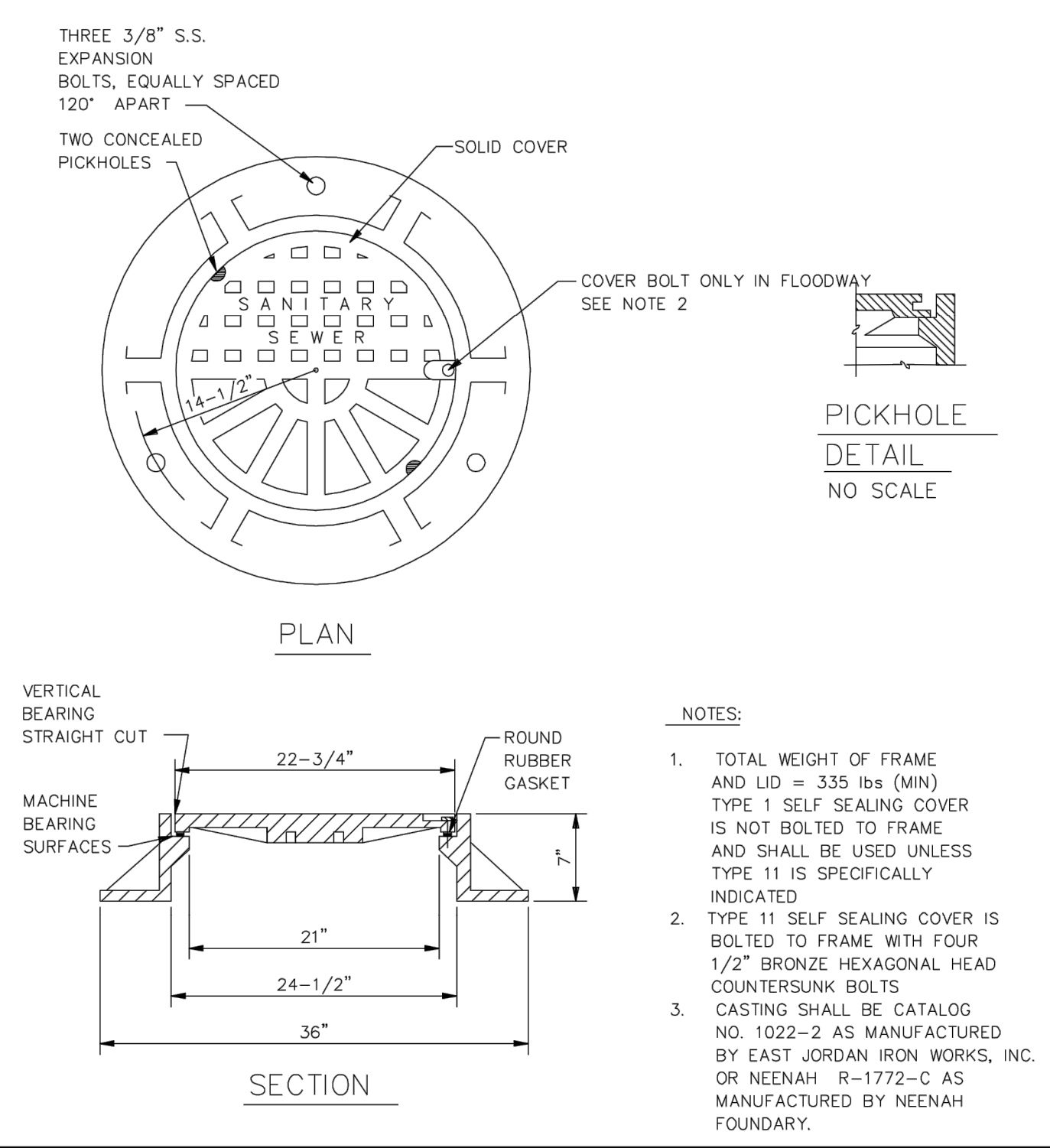
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VERTICAL SCALE	AS NOTED
SHEETS	106 of 126
PROJECT	15-3371



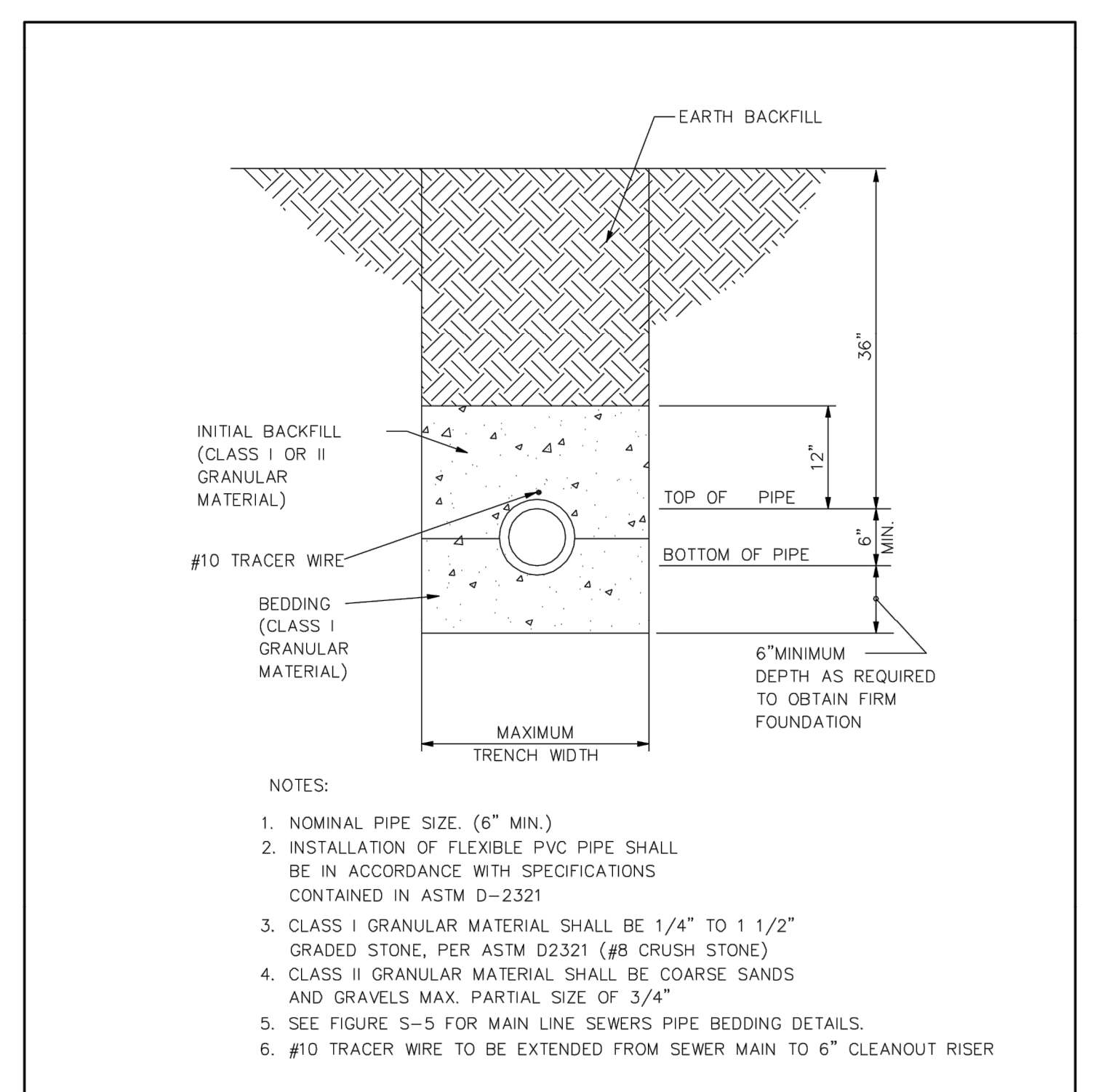
STANDARD SANITARY MANHOLE DETAIL



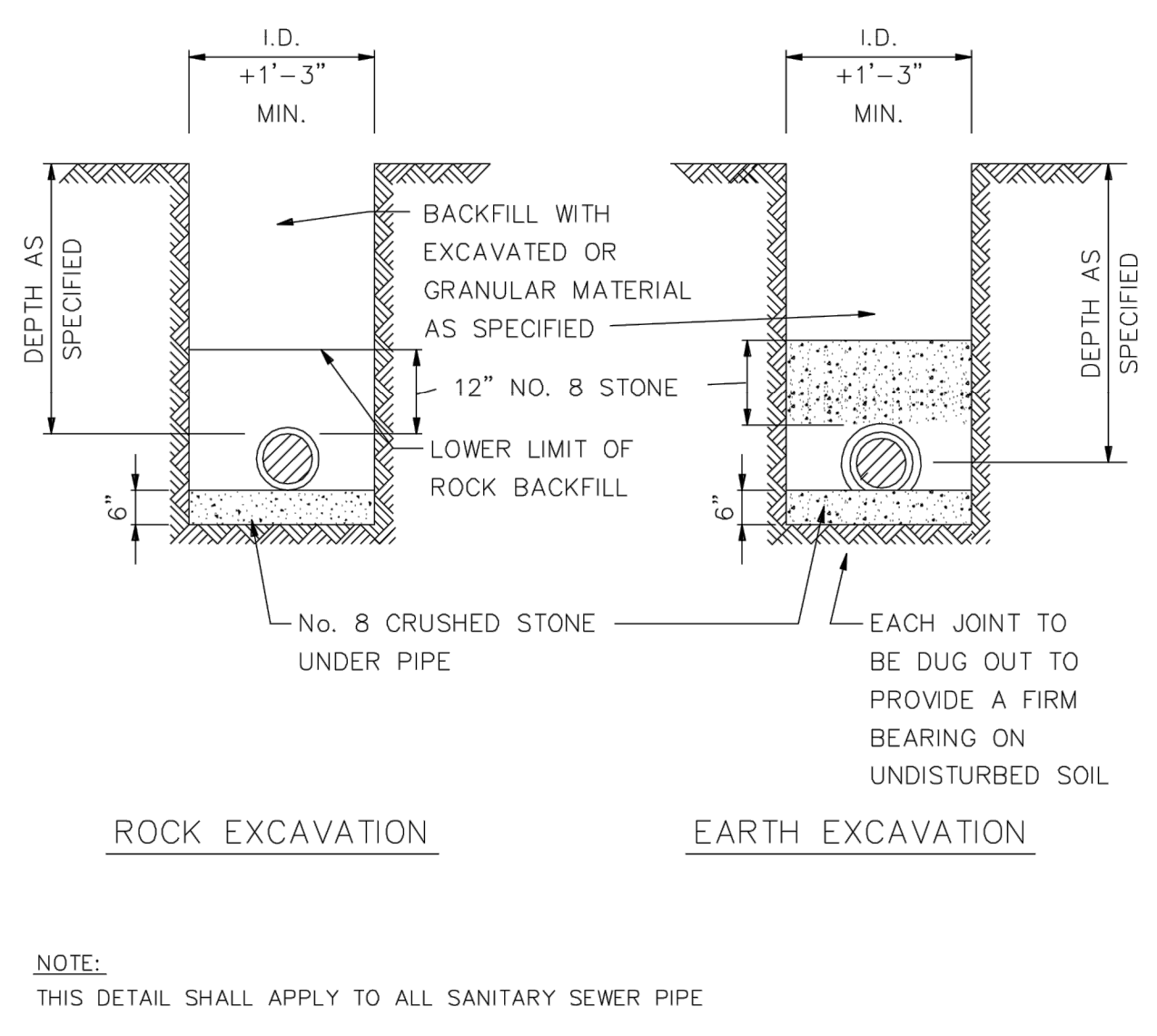
STANDARD SANITARY MANHOLE SPACER RING DETAIL



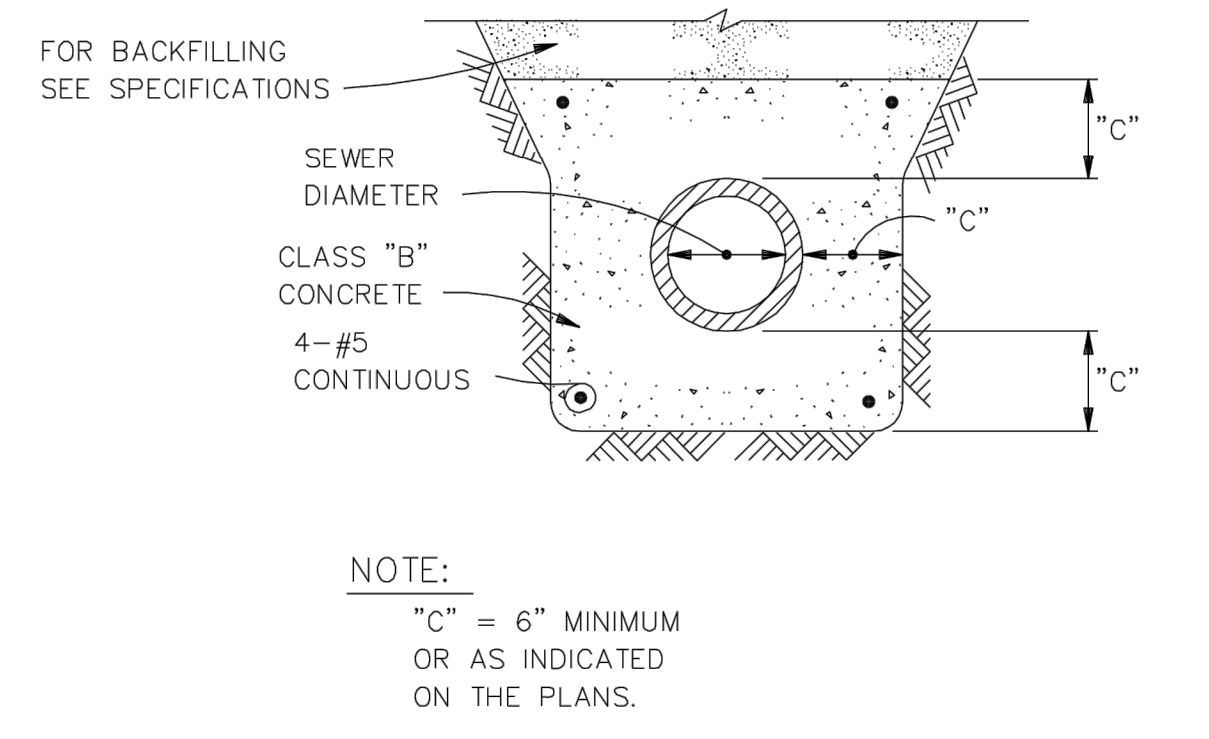
STANDARD SANITARY MANHOLE FRAME AND COVER DETAILS



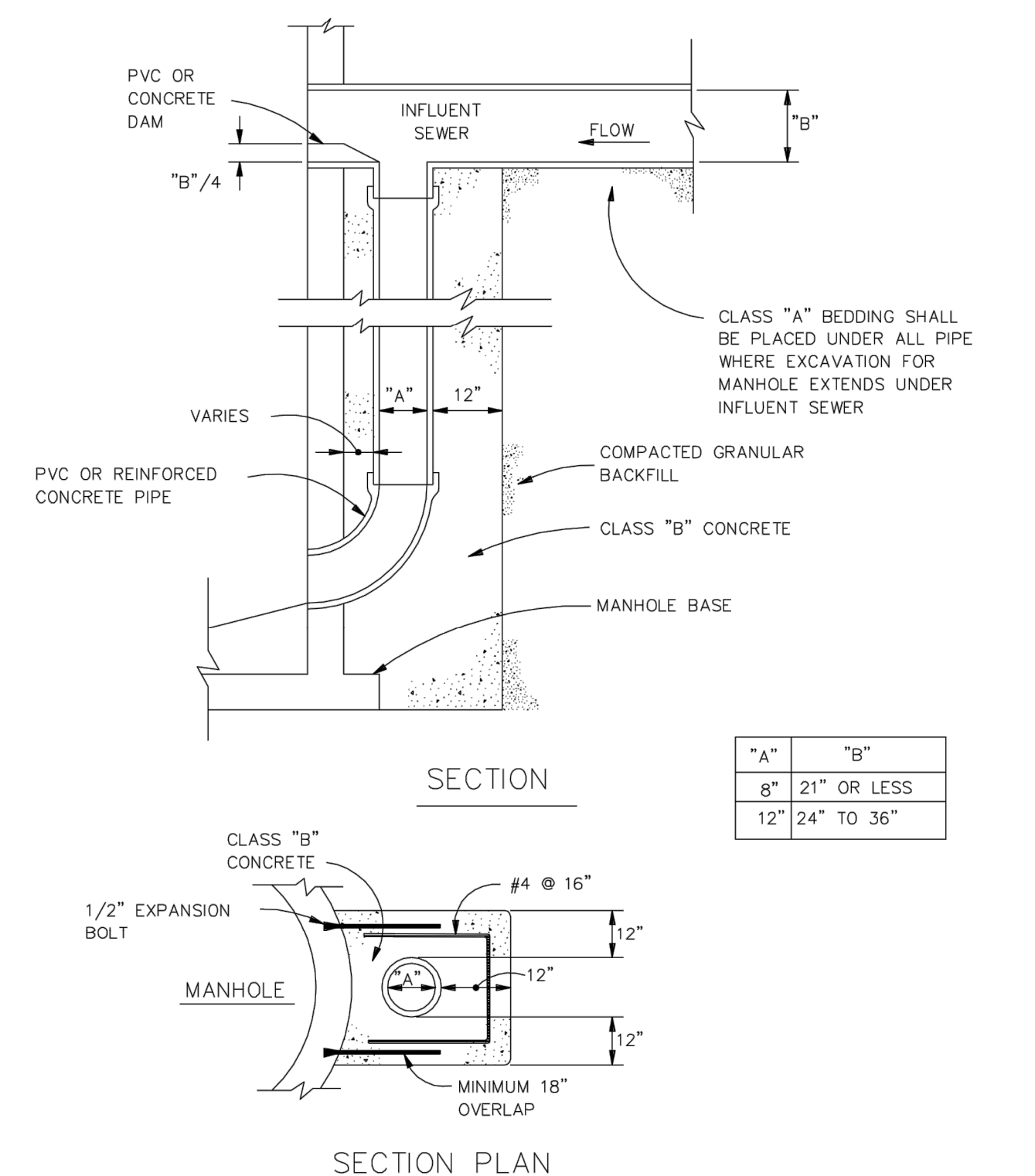
HOUSE/BUILDING SERVICE BEDDING DETAILS



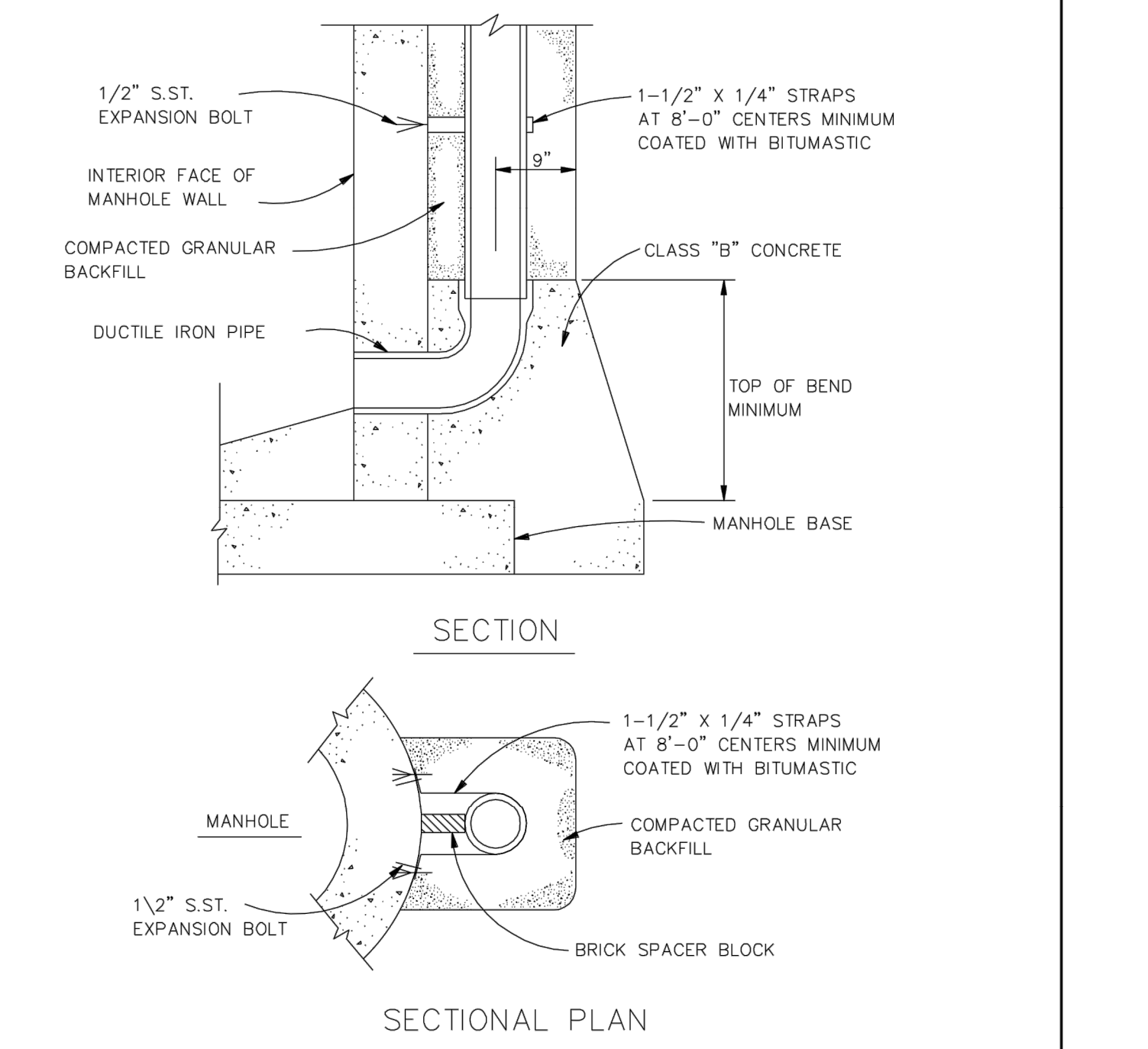
SEWER PIPE BEDDING DETAIL



CONCRETE ENCASEMENT DETAIL

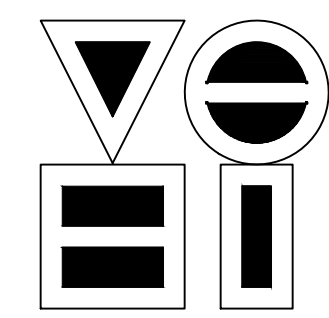


DROP PIPE DETAILS

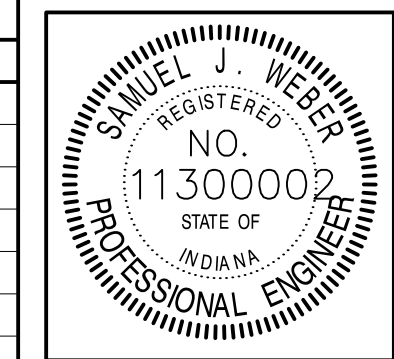


ALTERNATE PIPE DROP DETAILS

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 FILE: 15-3371 Details.dwg
 DIMSCALE: 1/8" = 1'-0"
 PLOTTED BY: J.Mowery
 DATE: Jun 06, 2018 - 7:09pm



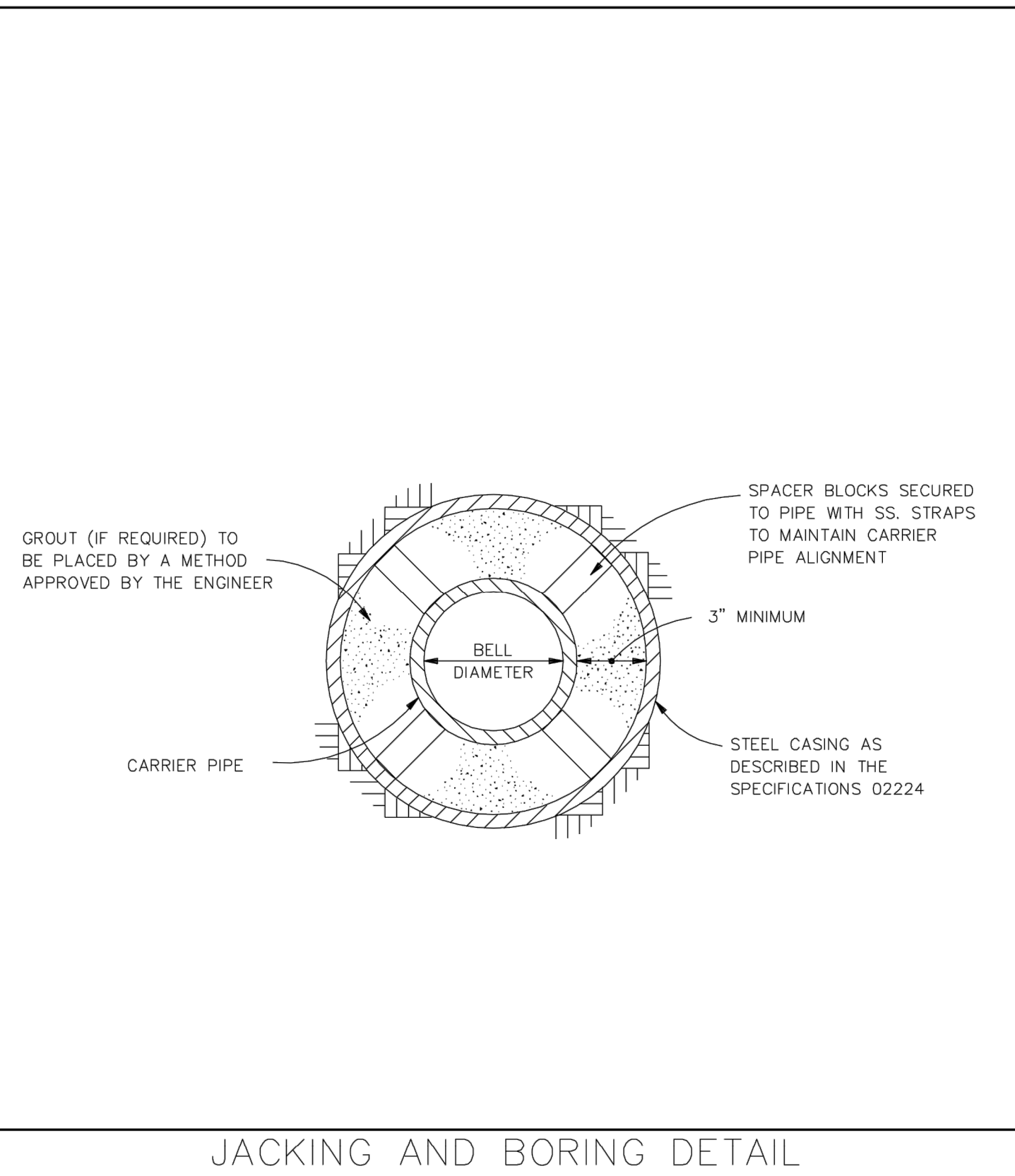
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 4275 North High School Road
 vsengineering.com
 Phone: (317) 293-3542
 Indianapolis, Indiana 46254
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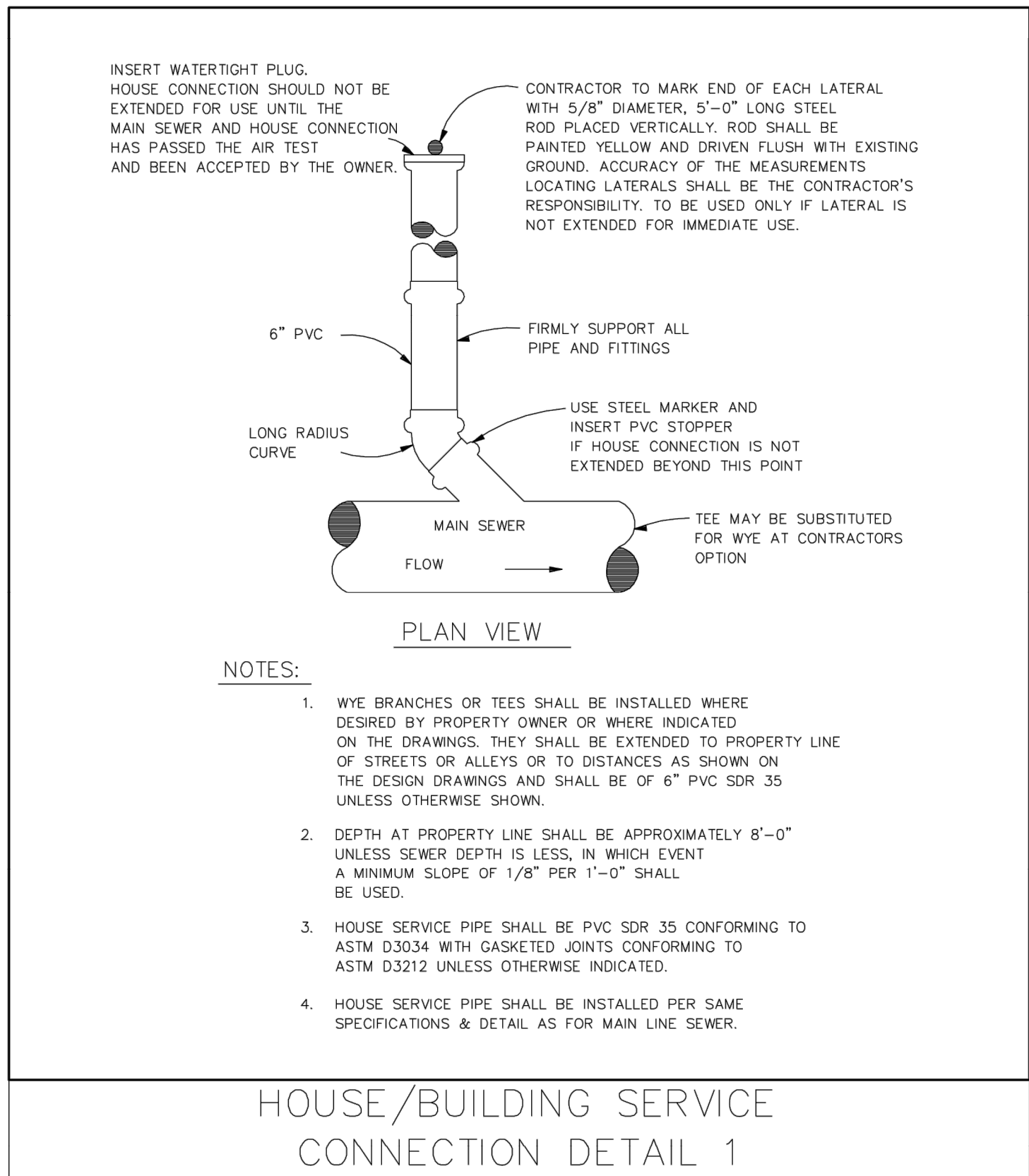
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 DESIGN ENGINEER: [Name] DATE: 06/07/18
 DESIGNED: KDK DRAWN: KDK
 CHECKED: SJW CHECKED: SJW

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
 MISCELLANEOUS DETAILS

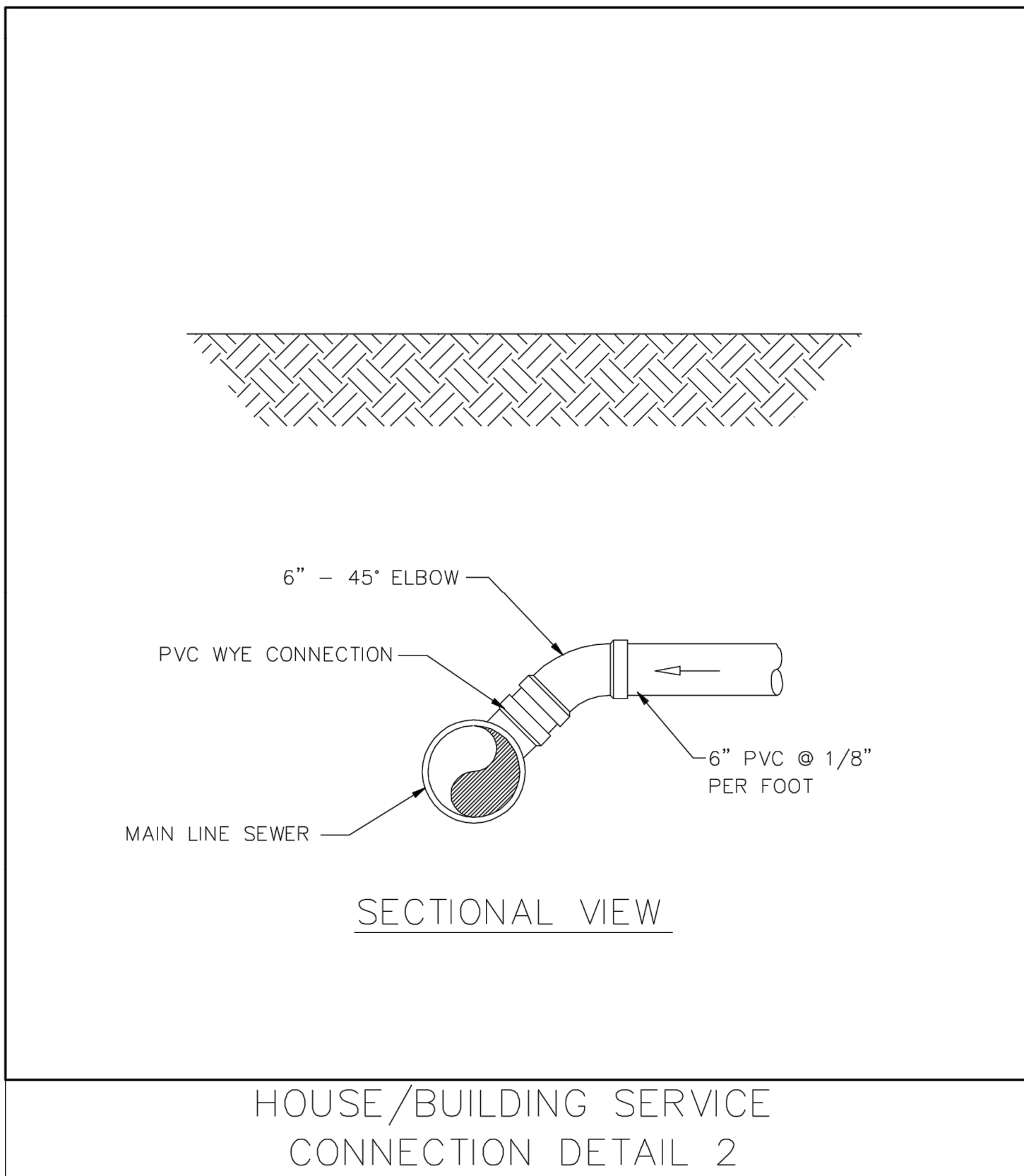
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VERTICAL SCALE	AS NOTED
SHEETS	107 of 126
PROJECT	15-3371



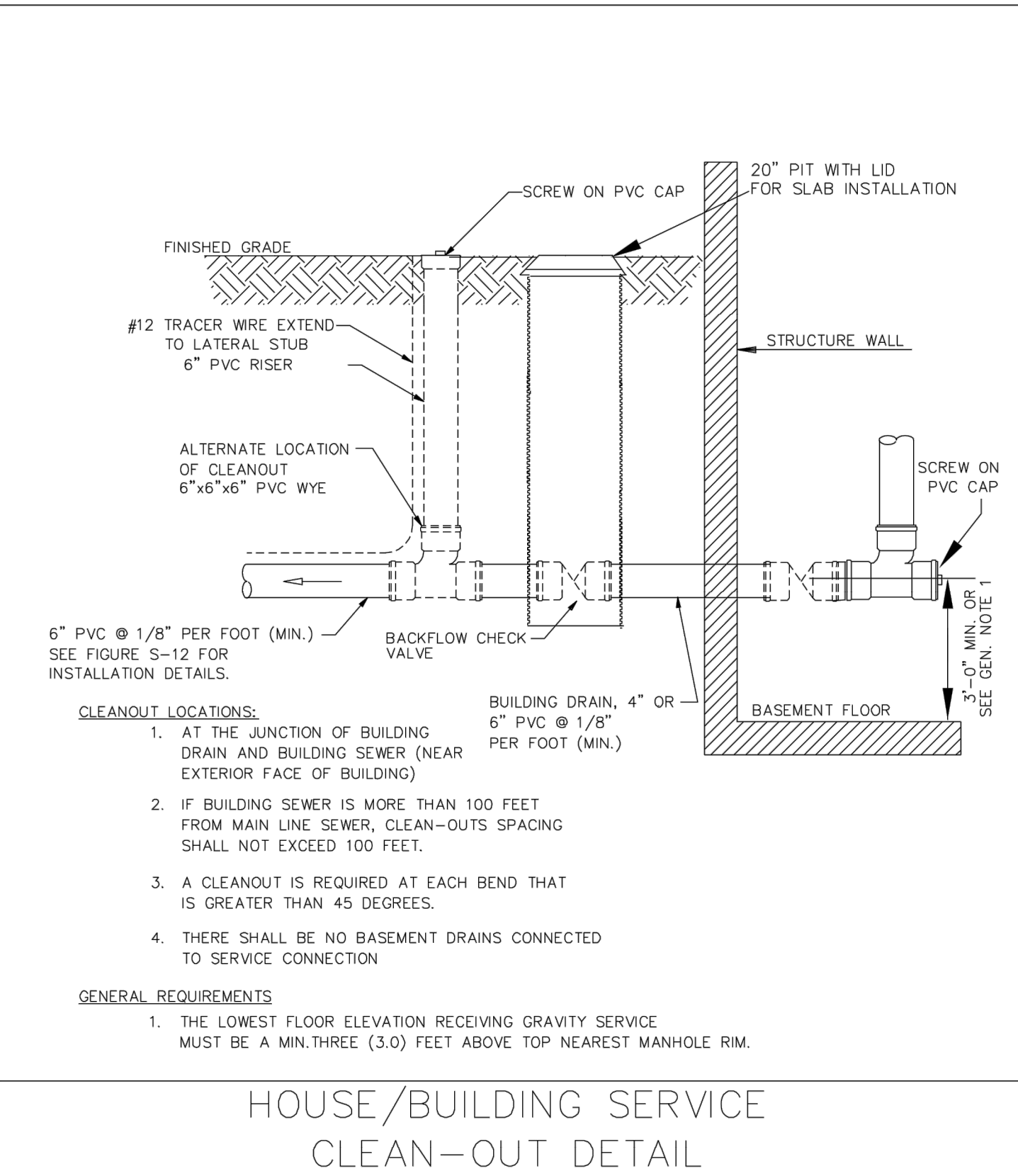
JACKING AND BORING DETAIL



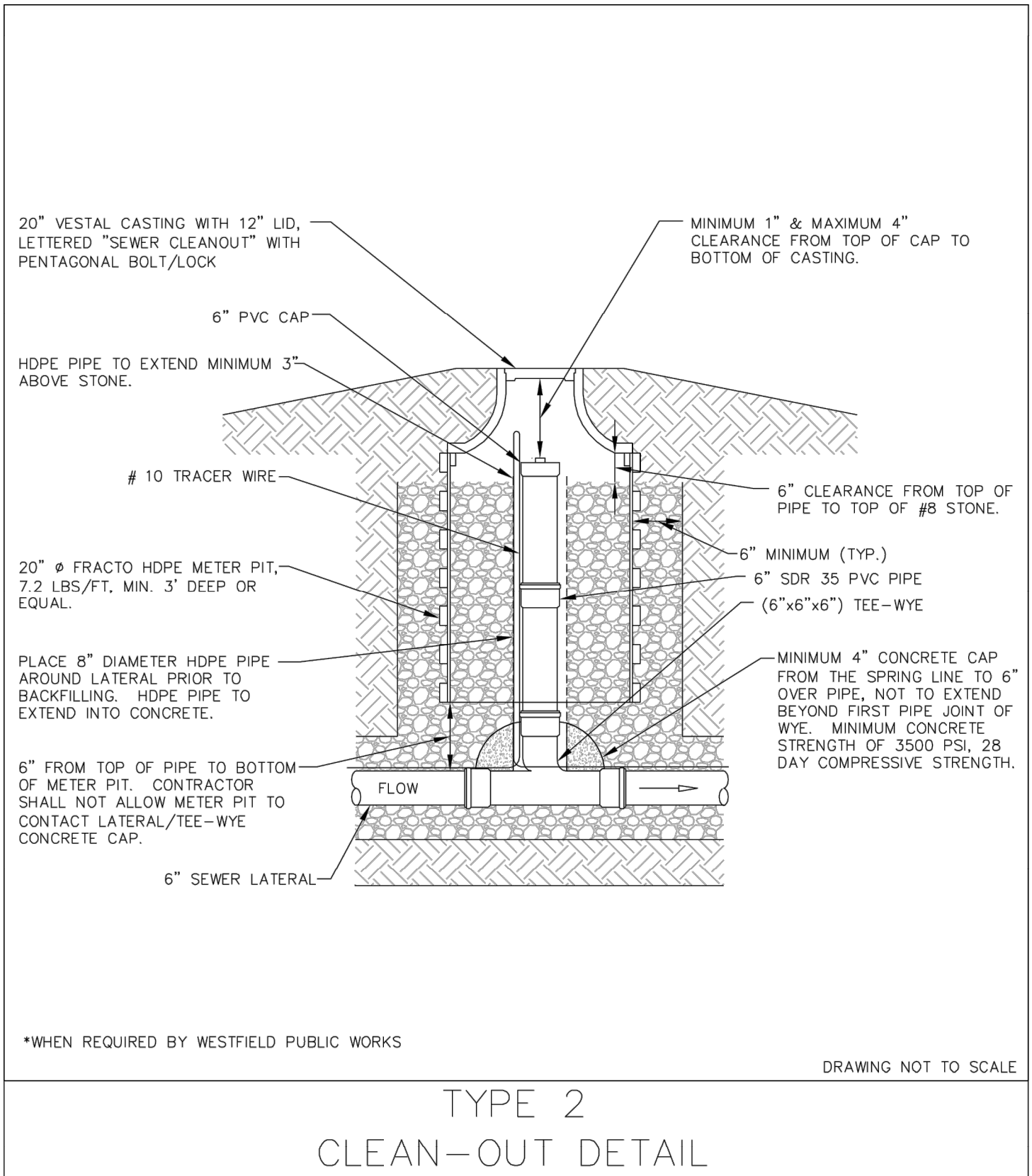
HOUSE/BUILDING SERVICE CONNECTION DETAIL 1



HOUSE/BUILDING SERVICE CONNECTION DETAIL 2

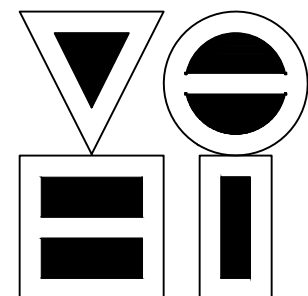


HOUSE/BUILDING SERVICE CLEAN-OUT DETAIL



TYPE 2 CLEAN-OUT DETAIL

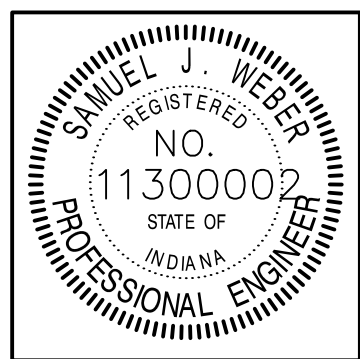
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 FILE: 15-3371 Details.dwg
 DIMSCALE: 1/8" = 1'-0"
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 7:09pm



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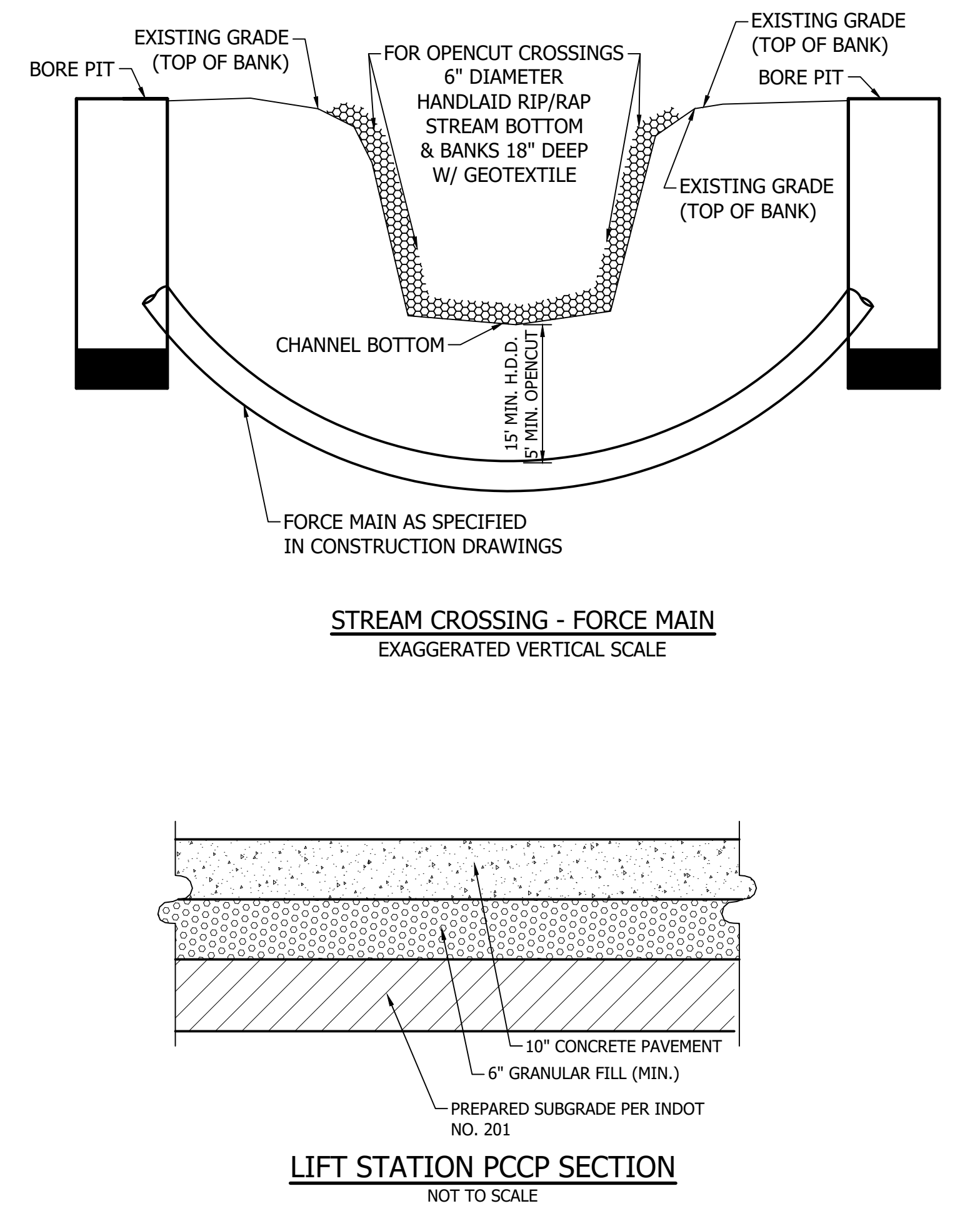
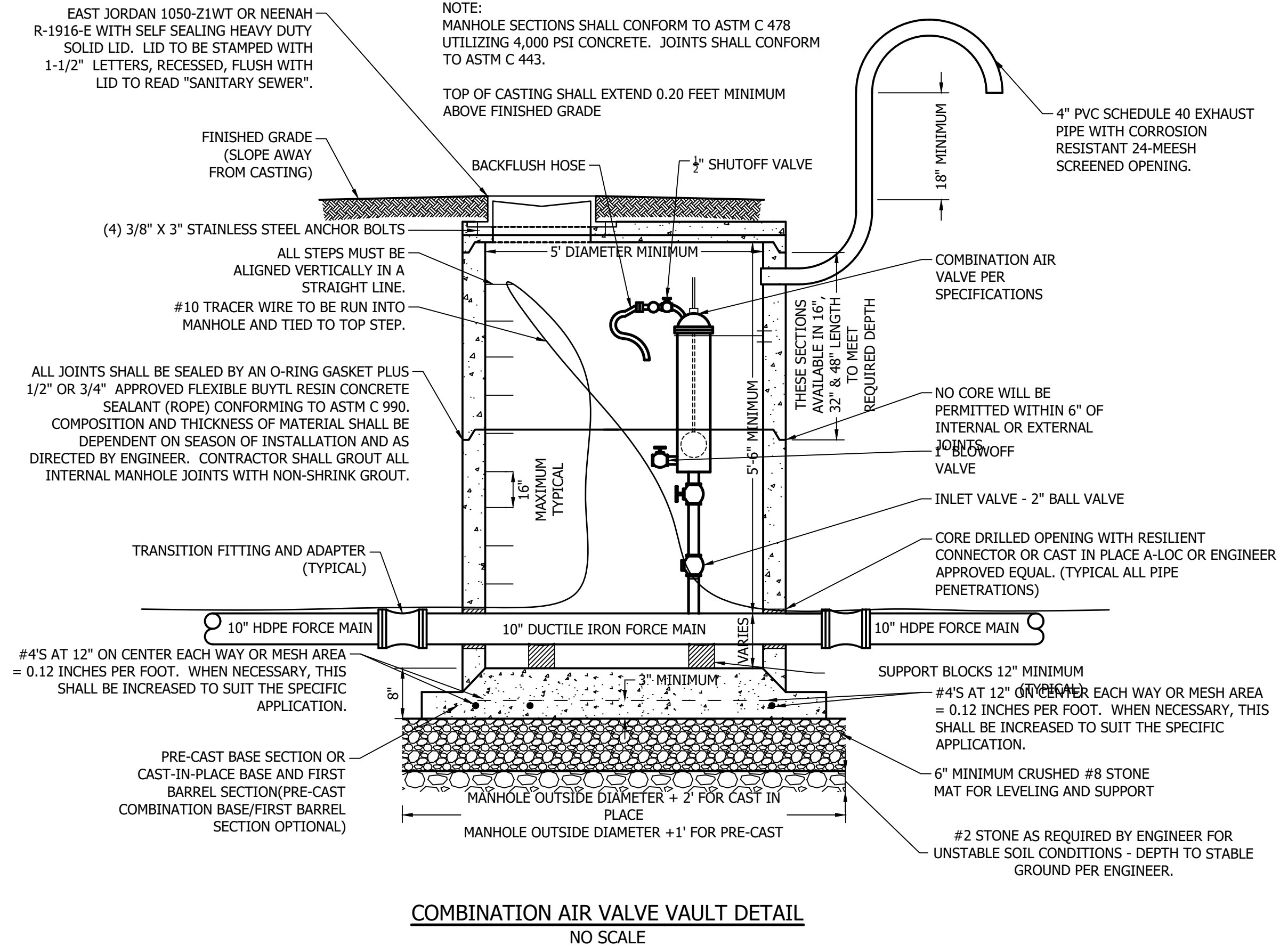
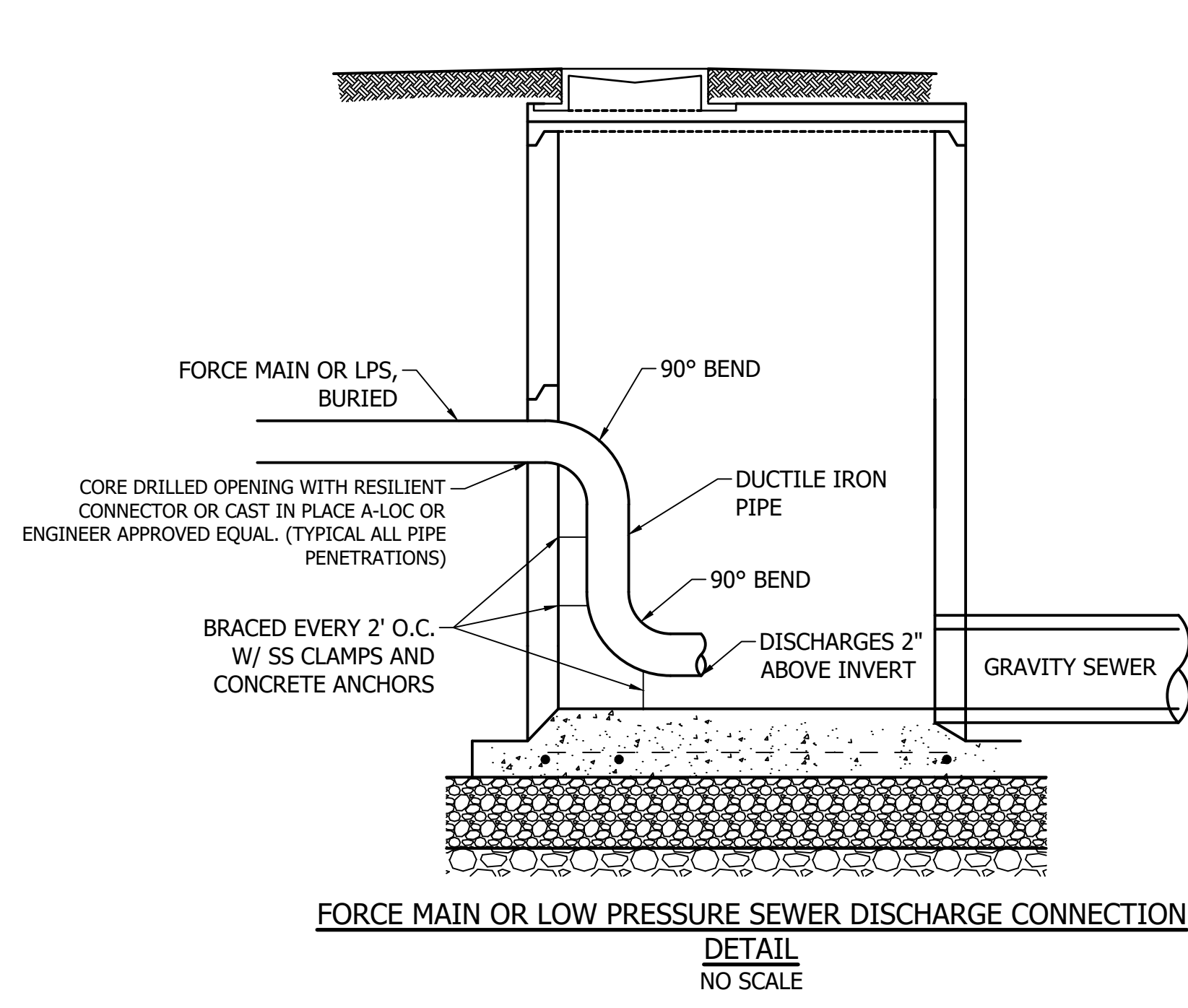


RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
	DESIGN ENGINEER	DATE
DESIGNED: KDK	DRAWN: KDK	
CHECKED: SJW	CHECKED: SJW	

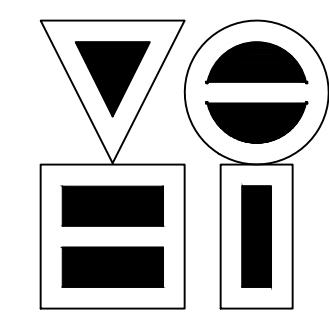
S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

MISCELLANEOUS DETAILS

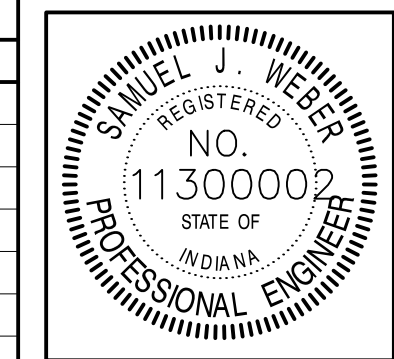
HORIZONTAL SCALE	AS NOTED
VERTICAL SCALE	AS NOTED
SHEETS	108 of 126
PROJECT	15-3371



DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\04-Details\
 FILE: 15-3371 Details.dwg
 DIMSCALE: 1/8" = 1'-0"
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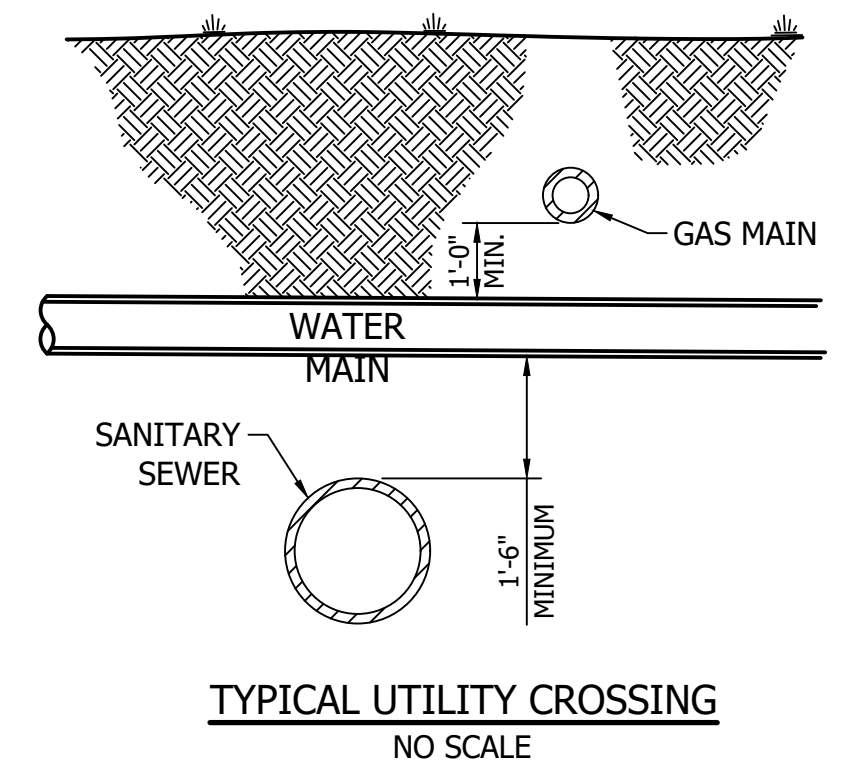
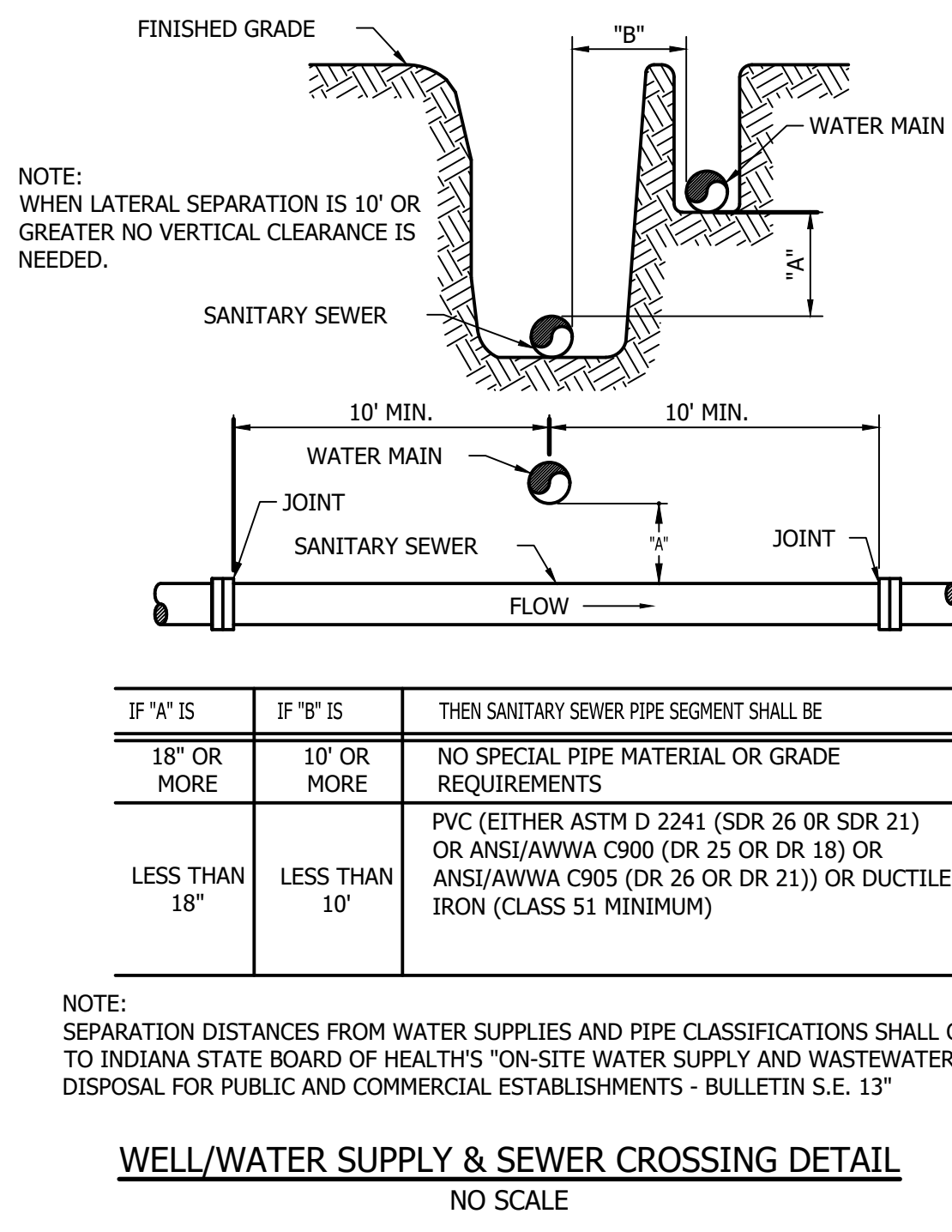
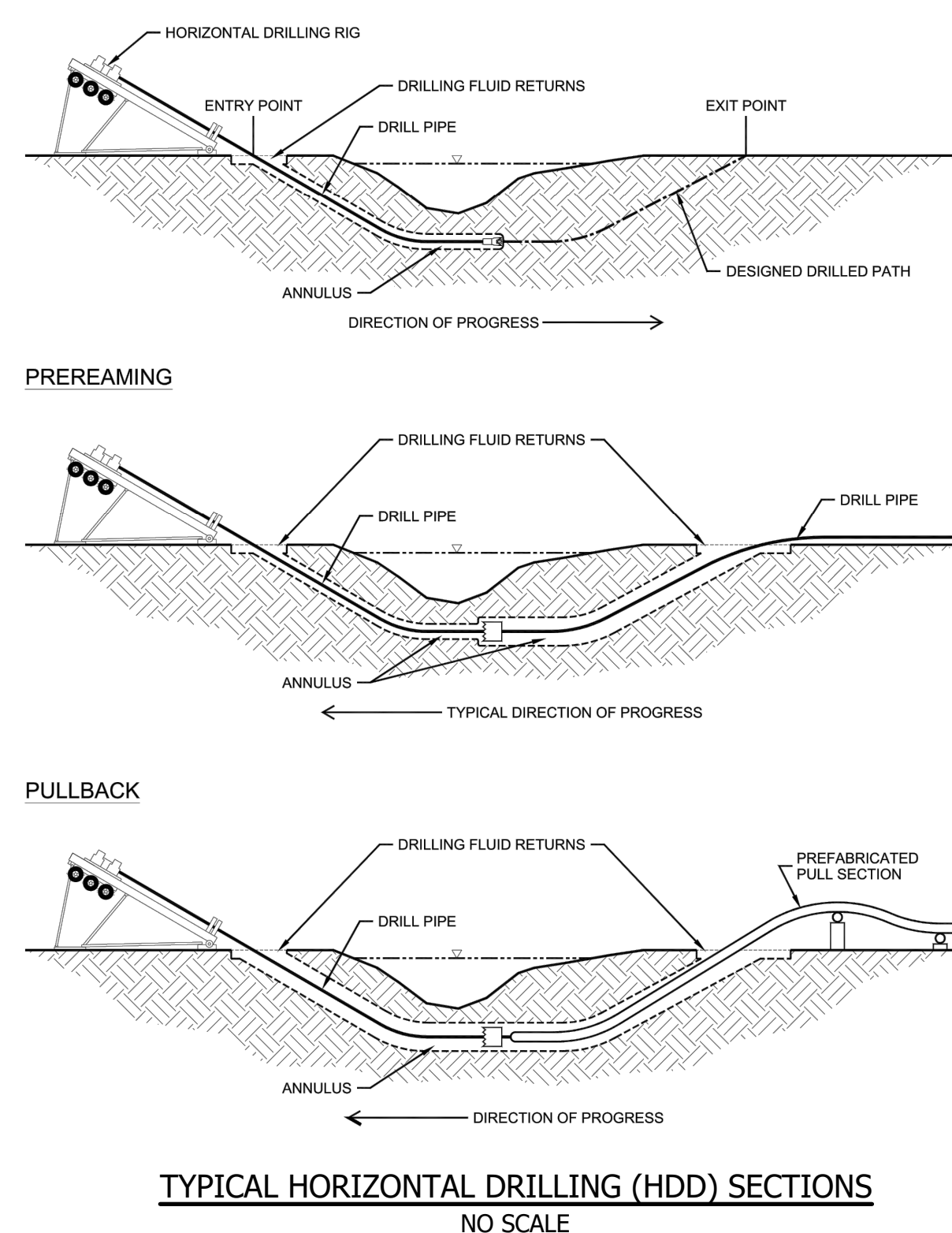
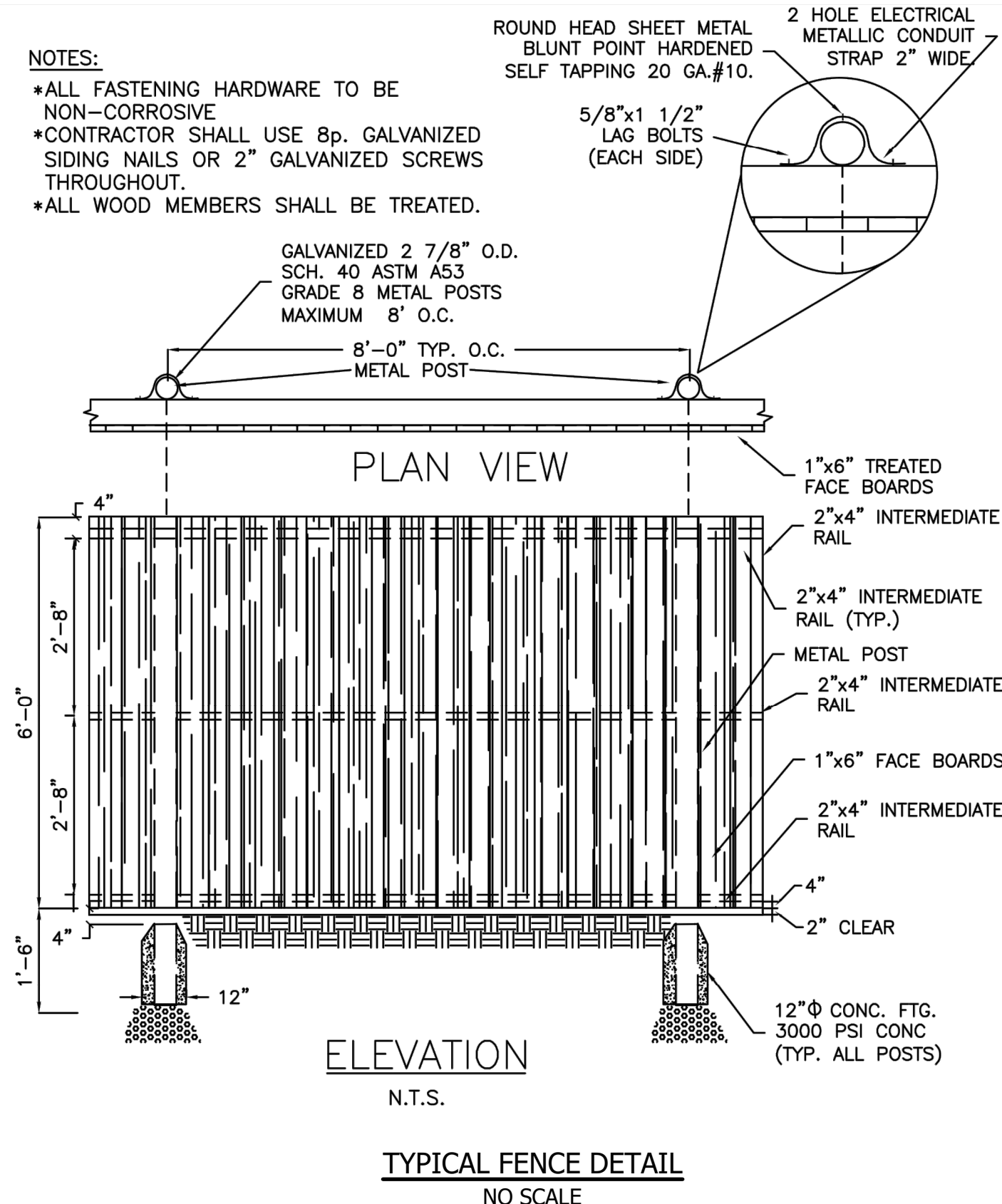


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	DESIGN ENGINEER	DATE
DESIGNED: KDK	DRAWN: KDK	
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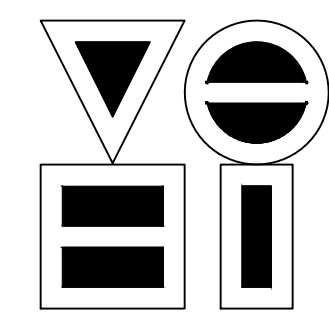
S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

MISCELLANEOUS DETAILS

HORIZONTAL SCALE	AS NOTED
VERTICAL SCALE	AS NOTED
SHEETS	109 of 126
PROJECT	15-3371



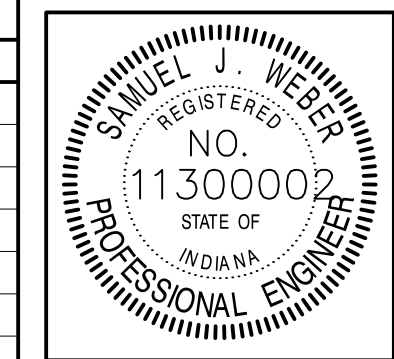
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CHECKED: SJW	CHECKED: SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

MISCELLANEOUS DETAILS

HORIZONTAL SCALE	AS NOTED
VERTICAL SCALE	AS NOTED
SHEETS	110 of 126
PROJECT	15-3371

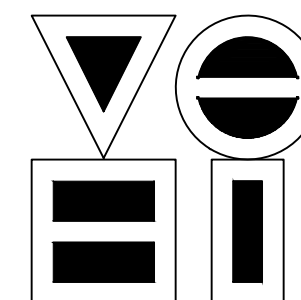
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 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 7:09pm

PROPOSED STORM STRUCTURES		
STATION:	STRUCTURE NAME: DESCRIPTION:	DETAILS:
0+12 LINE STM-1	ST-1 42" FLARED END SECTON	RIM = 774.29
1+28 LINE STM-1	ST-2 42" FLARED END SECTON	RIM = 777.81
0+61 LINE STM-2	ST-3 15" FLARED END SECTION	RIM = 780.26
0+09 LINE STM-2	ST-4 15" FLARED END SECTION	RIM = 779.46

PROPOSED SANITARY MANHOLES			
STATION:	STRUCTURE NAME: DESCRIPTION:	DETAILS:	MATERIAL
11+71 LINE SAN-3	41 48" SAN. MH	RIM = 815.26	D-025 REINFORCED NYLON ALL OTHER MODELS ARE EPOXY COATED STEEL
7+74 LINE SAN-3	42 48" SAN. MH	RIM = 810.32	D-025 REINFORCED NYLON ALL OTHER MODELS ARE EPOXY COATED STEEL
3+74 LINE SAN-3	43 48" SAN. MH	RIM = 795.94	D-025 REINFORCED NYLON ALL OTHER MODELS ARE EPOXY COATED STEEL
2+49 LINE SAN-3	44 48" SAN. DROP MH	RIM = 792.11	D-025 REINFORCED NYLON ALL OTHER MODELS ARE EPOXY COATED STEEL
4+11 LINE SAN-2	45 48" SAN. DROP MH	RIM = 796.13	D-025 REINFORCED NYLON ALL OTHER MODELS ARE EPOXY COATED STEEL
6+65 LINE SAN-2	46 48" SAN. MH	RIM = 800.75	D-025 REINFORCED NYLON ALL OTHER MODELS ARE EPOXY COATED STEEL
10+48 LINE SAN-2	47 48" SAN. MH	RIM = 805.94	D-025 REINFORCED NYLON ALL OTHER MODELS ARE EPOXY COATED STEEL
14+07 LINE SAN-2	48 48" SAN. MH	RIM = 811.63	D-025 REINFORCED NYLON ALL OTHER MODELS ARE EPOXY COATED STEEL
17+85 LINE SAN-2	49 48" SAN. MH	RIM = 815.24	D-025 REINFORCED NYLON ALL OTHER MODELS ARE EPOXY COATED STEEL
1+85 LINE SAN-3	50 48" SAN. DROP MH	RIM = 792.42	D-025 REINFORCED NYLON ALL OTHER MODELS ARE EPOXY COATED STEEL
0+58 LINE SAN-3	51 48" SAN. DROP MH	RIM = 780.31	D-025 REINFORCED NYLON ALL OTHER MODELS ARE EPOXY COATED STEEL
0+20 LINE SAN-3	52 96" WET WELL	RIM = 777.60	D-025 REINFORCED NYLON ALL OTHER MODELS ARE EPOXY COATED STEEL
0+87 LINE LPS-2	54 48" SAN. MH	RIM = 779.11	D-025 REINFORCED NYLON ALL OTHER MODELS ARE EPOXY COATED STEEL
0+00 LINE SAN-1	56 96" WET WELL	RIM = 779.60	D-025 REINFORCED NYLON ALL OTHER MODELS ARE EPOXY COATED STEEL
0+48 LINE SAN-1	57 48" SAN. MH	RIM = 779.94	D-025 REINFORCED NYLON ALL OTHER MODELS ARE EPOXY COATED STEEL
0+91 LINE SAN-1	58 48" SAN. DROP MH	RIM = 780.64	D-025 REINFORCED NYLON ALL OTHER MODELS ARE EPOXY COATED STEEL
4+91 LINE SAN-1	59 48" SAN. MH	RIM = 786.00	D-025 REINFORCED NYLON ALL OTHER MODELS ARE EPOXY COATED STEEL
8+91 LINE SAN-1	60 48" SAN. MH	RIM = 790.38	D-025 REINFORCED NYLON ALL OTHER MODELS ARE EPOXY COATED STEEL
13+53 LINE SAN-1	61 48" SAN. MH	RIM = 793.31	D-025 REINFORCED NYLON ALL OTHER MODELS ARE EPOXY COATED STEEL

PROPOSED FORCE MAIN FITTINGS		
STATION:	FITTING NAME:	DESCRIPTION:
0+59 LINE FM-1	01	6" 22.5° BEND
0+87 LINE FM-1	02	6" 22.5° BEND
0+03 LINE LPS-1	09	3" TEE
7+78 LINE LPS-1	10	3"X2" TEE
130+21 LINE FM-1	14	6" 45° BEND
130+32 LINE FM-1	15	6" 45° BEND
133+42 LINE FM-1	16	6" 45° BEND
133+58 LINE FM-1	17	6" 45° BEND
139+46 LINE FM-1	18	6" 45° BEND
139+54 LINE FM-1	19	6" 45° BEND
141+16 LINE FM-1	20	6" 45° BEND
141+24 LINE FM-1	21	6" 45° BEND
141+46 LINE FM-1	22	6" 45° BEND
141+49 LINE FM-1	23	6" 45° BEND
38+15 LINE FM-2	31	4" 22.5° BEND
39+22 LINE FM-2	32	4" 22.5° BEND
2+71 LINE LPS-3	34	2" 22.5° BEND
2+98 LINE LPS-3	35	2" 22.5° BEND
3+25 LINE LPS-3	36	2" 22.5° BEND
4+38 LINE LPS-3	37	2" 45° BEND
4+63 LINE LPS-3	38	2" 45° BEND

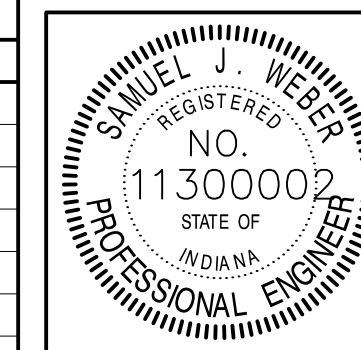
PROPOSED FORCEMAIN AIR RELEASE VALVES		
STATION:	FITTING NAME:	DESCRIPTION:
13+50 LINE FM-1	03	2" A.R.V.
33+60 LINE FM-1	04	2" A.R.V.
60+46 LINE FM-1	05	2" A.R.V.
99+05 LINE FM-1	07	2" A.R.V.
127+46 LINE FM-1	13	2" A.R.V.
5+42 LINE FM-2	27	1" A.R.V.
18+35 LINE FM-2	28	1" A.R.V.
27+32 LINE FM-2	29	1" A.R.V.
34+03 LINE FM-2	30	1" A.R.V.
41+50 LINE FM-2	33	1" A.R.V.



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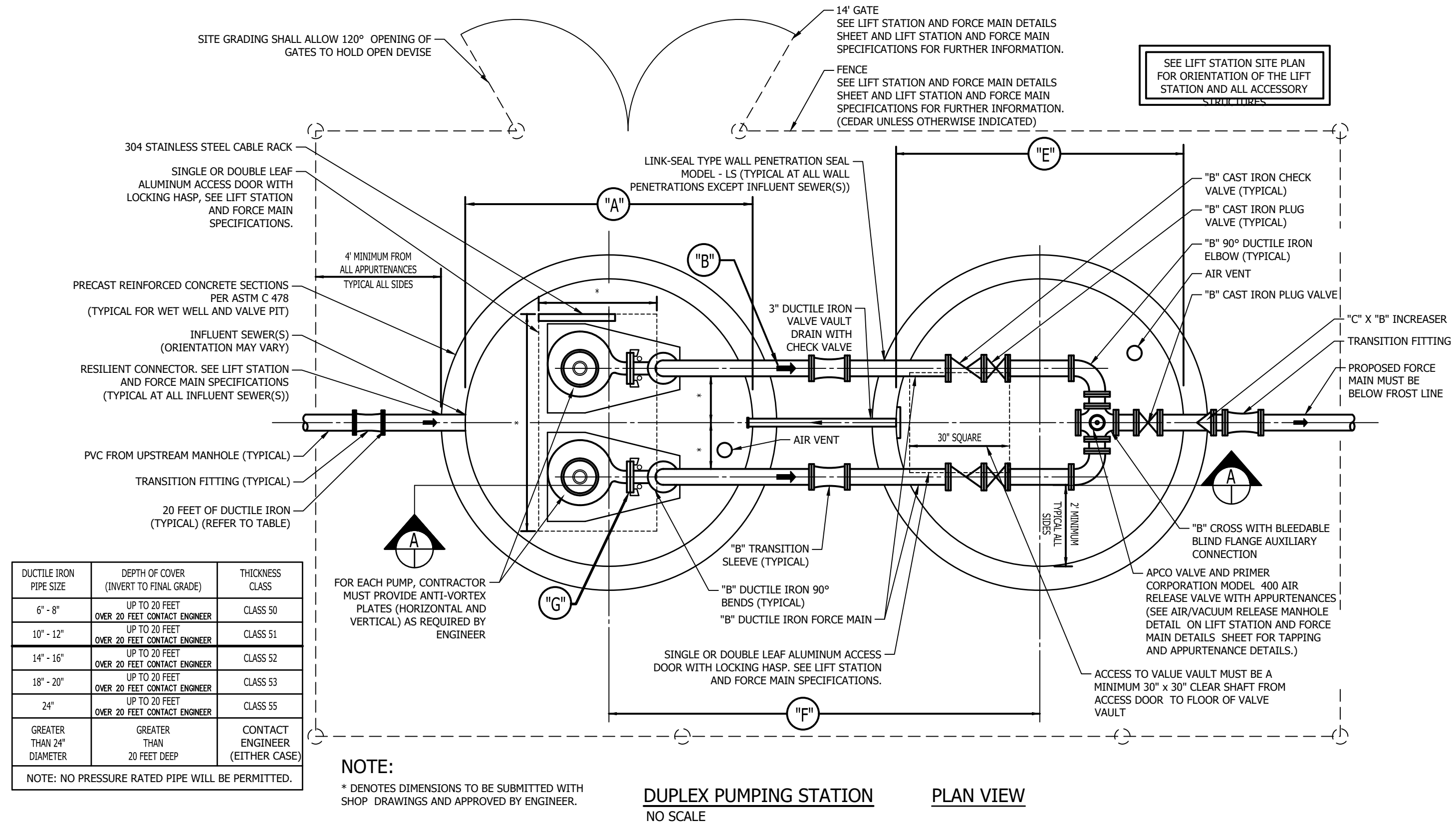
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	DESIGN ENGINEER	DATE
DESIGNED: KDK	DRAWN: KDK	
CHECKED: SJW	CHECKED: SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

STRUCTURE DATA TABLE

HORIZONTAL SCALE	AS NOTED
VERTICAL SCALE	AS NOTED
SHEETS	111 of 126
PROJECT	15-3371

DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\04-Details\
 FILE: 15-3371 Details.dwg
 DIMSCALE: 1/4" = 1'-0"
 PLOTTED BY: J.Mowery
 DATE: Jun 06, 2018 - 7:09pm



DUCTILE IRON PIPE SIZE	DEPTH OF COVER (INVERT TO FINAL GRADE)	THICKNESS CLASS
6" - 8"	UP TO 20 FEET	CLASS 50
10" - 12"	OVER 20 FEET	CLASS 51
14" - 16"	UP TO 20 FEET	CLASS 52
18" - 20"	OVER 20 FEET	CLASS 53
24"	UP TO 20 FEET	CLASS 55
GREATER THAN 24" DIAMETER	GREATER THAN 20 FEET DEEP	CONTACT ENGINEER (EITHER CASE)

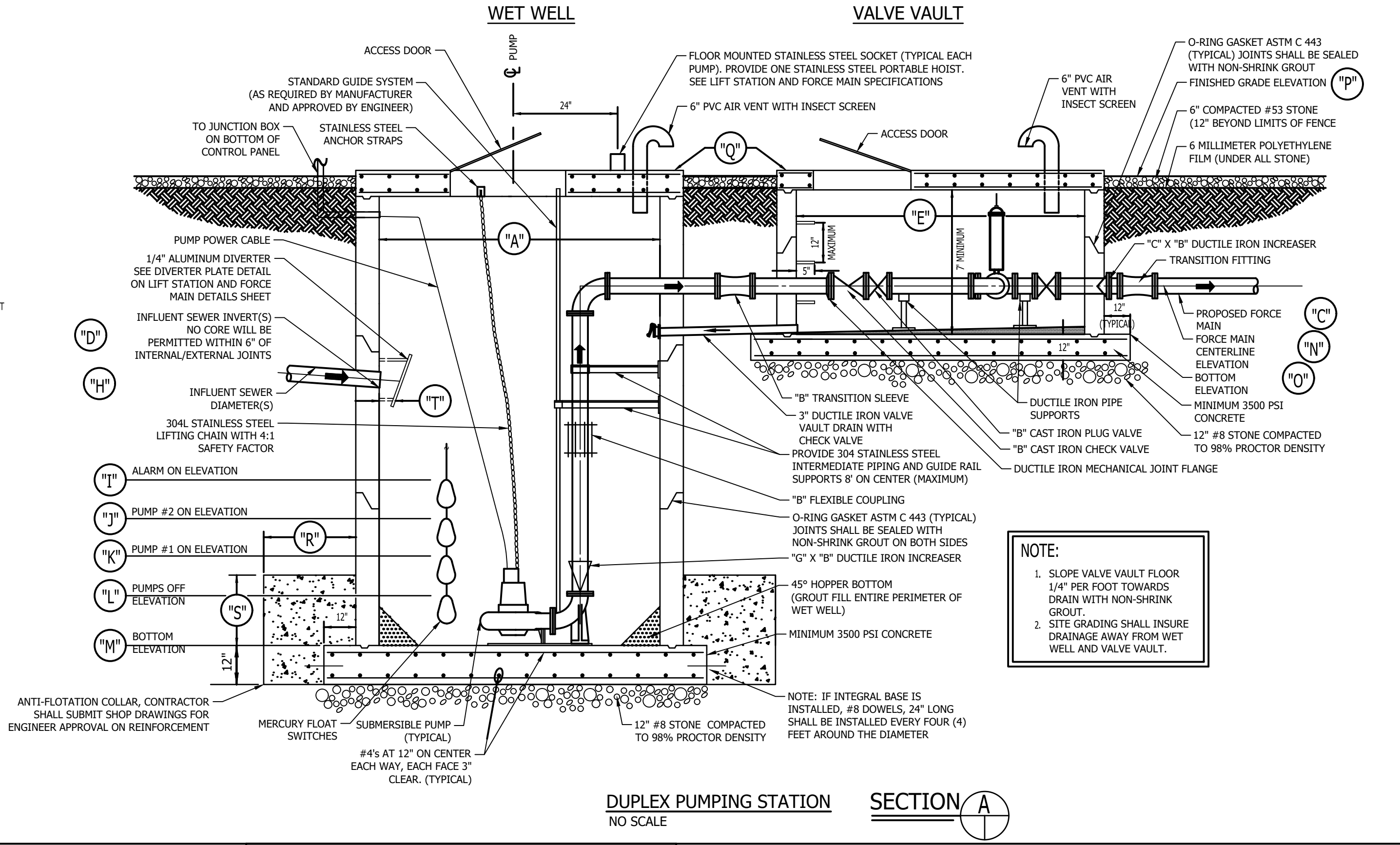
NOTE: NO PRESSURE RATED PIPE WILL BE PERMITTED.

DIMENSION CHART

(A)	96"	WET WELL DIAMETER
(B)	4"	STATION PIPING SIZE
(C)	6"	FORCE MAIN SIZE
(D)	15"	INFLUENT SANITARY SEWER DIAMETER(S)
(E)	96"	VALVE VAULT DIMENSIONS
(F)	16"	CENTER OF WET WELL TO CENTER OF VALVE VAULT
(G)	3"	PUMP DISCHARGE SIZE
(R)	2.5"	WIDTH OF ANTI-FLOATATION COLLAR
(S)	2"	DEPTH OF ANTI-FLOATATION COLLAR
(T)	768.00	DIVERTER PLATE SEPARATION(S)

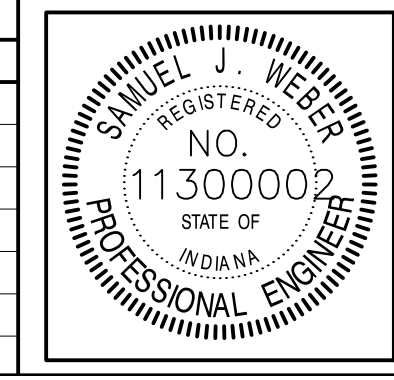
ELEVATION CHART

(H)	768.00	INFLUENT SANITARY SEWER INVERT(S)
(I)	768.00	INITIAL
(J)	769.00	FUTURE
(K)	766.50	INITIAL
(L)	767.50	FUTURE
(M)	765.00	INITIAL
(N)	766.00	FUTURE
(O)	763.00	INITIAL
(P)	763.00	FUTURE
(Q)	761.00	BOTTOM ELEVATION - WET WELL
(R)	768.50	FORCE MAIN CENTERLINE ELEVATION
(S)	766.50	BOTTOM ELEVATION - VALVE VAULT
(T)	777.40	FINISHED GRADE
(U)	777.60	TOP OF WET WELL AND VALVE VAULT



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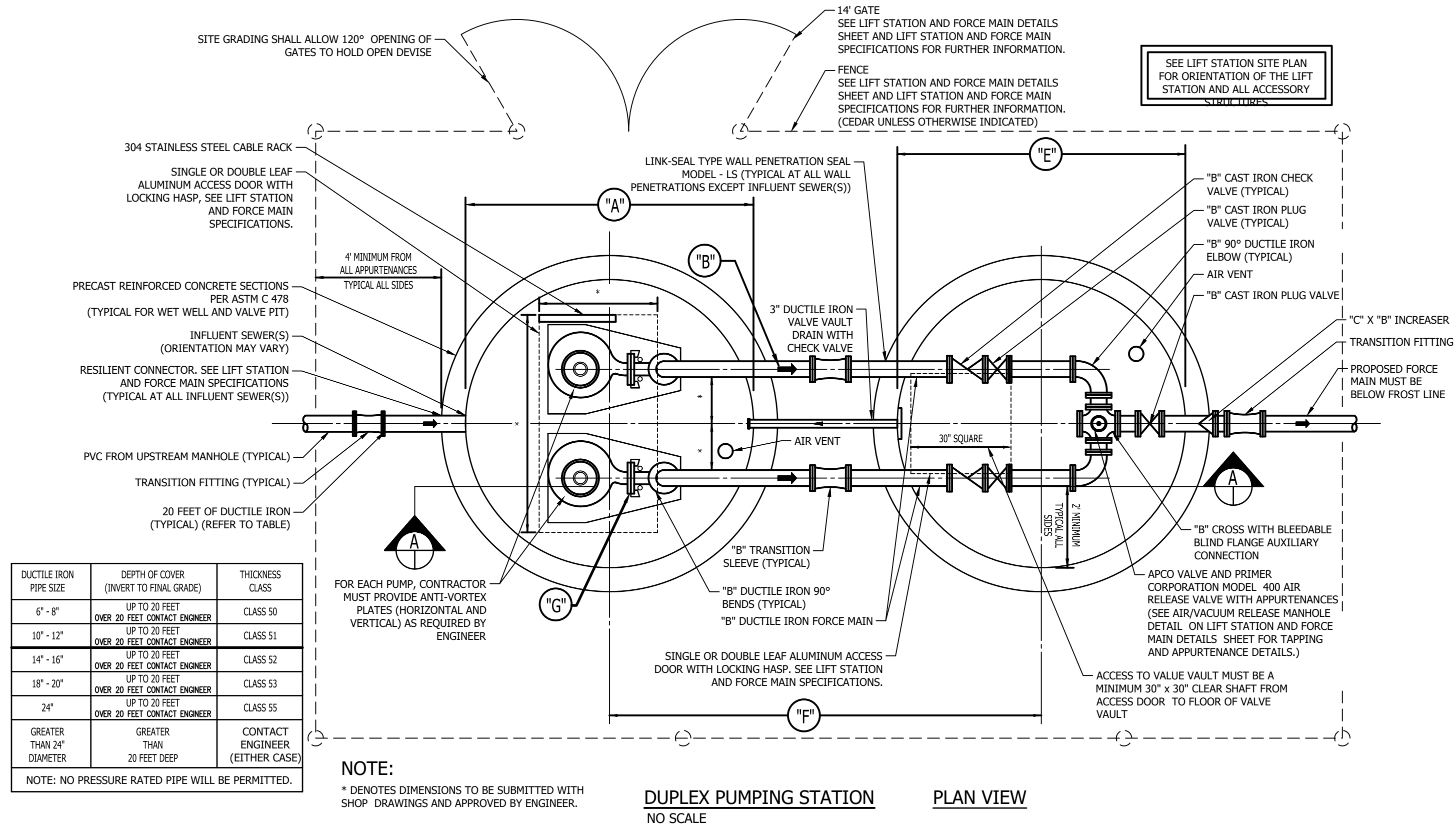
RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED:	KDK	DATE
DRAWN:	KDK	
CHECKED:	SJW	
	SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

EAST LIFTSTATION LIFTSTATION DETAILS

HORIZONTAL SCALE
VERTICAL SCALE
AS NOTED
SHEETS
112 of 126
PROJECT
15-3371

DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\04-Details
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DUCTILE IRON PIPE SIZE	DEPTH OF COVER (INVERT TO FINAL GRADE)	THICKNESS CLASS
6" - 8"	UP TO 20 FEET	CLASS 50
10" - 12"	OVER 20 FEET	CLASS 51
14" - 16"	UP TO 20 FEET	CLASS 52
18" - 20"	OVER 20 FEET	CLASS 53
24"	UP TO 20 FEET	CLASS 55
GREATER THAN 24" DIAMETER	GREATER THAN 20 FEET DEEP	CONTACT ENGINEER (EITHER CASE)

NOTE: NO PRESSURE RATED PIPE WILL BE PERMITTED.

NOTE:
 * DENOTES DIMENSIONS TO BE SUBMITTED WITH SHOP DRAWINGS AND APPROVED BY ENGINEER.

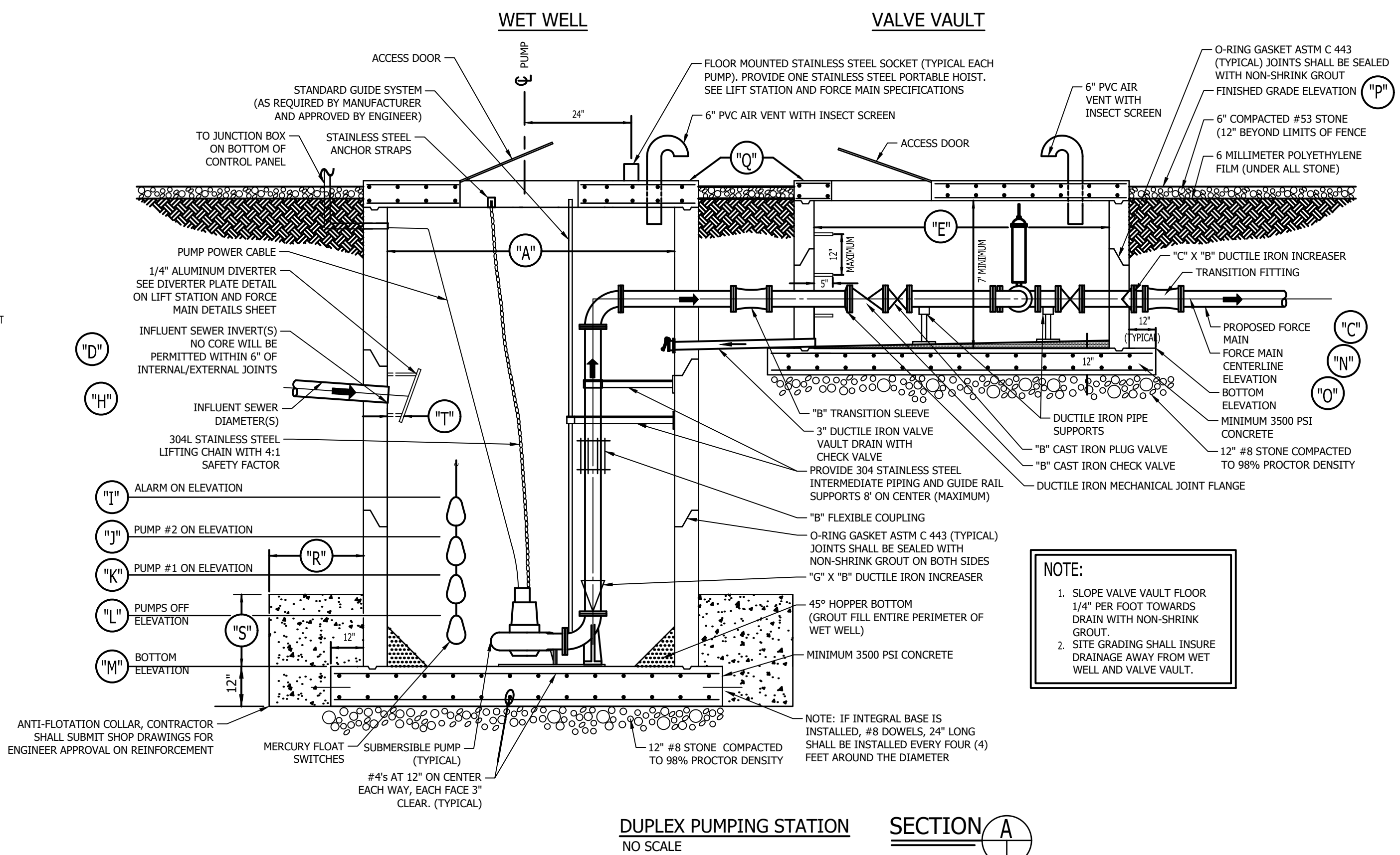
DUPLEX PUMPING STATION
 NO SCALE
 PLAN VIEW

DIMENSION CHART

(A)	96"	WET WELL DIAMETER
(B)	4"	STATION PIPING SIZE
(C)	4"	FORCE MAIN SIZE
(D)	12"	INFLUENT SANITARY SEWER DIAMETER(S)
(E)	96"	VALVE VAULT DIMENSIONS
(F)	18"	CENTER OF WET WELL TO CENTER OF VALVE VAULT
(G)	3"	PUMP DISCHARGE SIZE
(R)	2.5"	WIDTH OF ANTI-FLOATATION COLLAR
(S)	3"	DEPTH OF ANTI-FLOATATION COLLAR
(T)	763.33	DIVERTER PLATE SEPARATION(S)

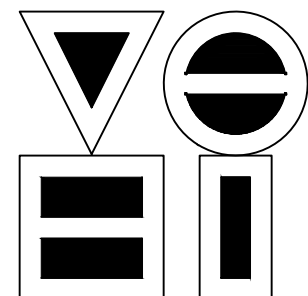
ELEVATION CHART

(H)	763.33	INFLUENT SANITARY SEWER INVERT(S)
(I)	763.50	INITIAL
(J)	761.50	FUTURE
(K)	762.50	INITIAL
(L)	762.50	FUTURE
(M)	760.50	INITIAL
(N)	761.50	FUTURE
(O)	759.50	INITIAL
(P)	759.50	FUTURE
(Q)	756.50	BOTTOM ELEVATION - WET WELL
(R)	772.00	FORCE MAIN CENTERLINE ELEVATION
(S)	770.00	BOTTOM ELEVATION - VALVE VAULT
(T)	779.40	FINISHED GRADE
(U)	779.60	TOP OF WET WELL AND VALVE VAULT

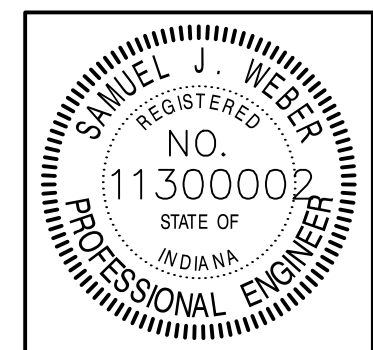


NOTE:
 1. SLOPE VALVE VAULT FLOOR 1/4" PER FOOT TOWARDS DRAIN WITH NON-SHRINK GROUT.
 2. SITE GRADING SHALL INSURE DRAINAGE AWAY FROM WET WELL AND VALVE VAULT.

DUPLEX PUMPING STATION
 NO SCALE
 SECTION A



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 www.vsengineering.com
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RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
	DESIGN ENGINEER	DATE
DESIGNED: KDK	DRAWN: KDK	
CHECKED: SJW	CHECKED: SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
WEST LIFTSTATION LIFTSTATION DETAILS

HORIZONTAL SCALE
VERTICAL SCALE
AS NOTED
SHEETS
113 of 126
PROJECT
15-3371

SAMPLE		DESCRIPTION/CLASSIFICATION and REMARKS	SOIL PROPERTIES						
No.	Depth ft		q_u tsf	q_v tsf	γ pcf	W %	LL %	PL %	PI %
SS-1	40 15	ASPHALTIC CONCRETE							
		GRANULAR SUBBASE, (sand and gravel)							
SS-2	100 10	SP-SM, POORLY GRADED SAND with SILT, little gravel, medium dense, moist, brown							
SS-3	100 9	SM, SILTY SAND, trace gravel, loose, moist, brown, fine to medium grained							
SS-4	90 7								
SS-5	100 33	CL-ML, SILTY CLAY, some sand, trace gravel, very stiff, brown	3%			10.1			
End of Boring at 12.5 ft									
WATER LEVEL OBSERVATIONS			GENERAL NOTES						
Depth ft	While Drilling	Upon Completion	Start 4/30/18 End 4/30/18 Rig CME 75 Drilling Method 3/4" I.D. HSA Truck						
To Water	NW	NW	Remarks: Backfilled with auger cuttings and bentonite chip plug, and the roadway was restored with a pavement patch.						
To Cave-in		11	The stratification lines represent the approximate boundary between soil/rock types and the transition may be gradual.						

SAMPLE		DESCRIPTION/CLASSIFICATION and REMARKS	SOIL PROPERTIES						
No.	Depth ft		q_u tsf	q_v tsf	γ pcf	W %	LL %	PL %	PI %
SS-1	85 29	ASPHALTIC CONCRETE							
		GRANULAR SUBBASE, (sand and gravel)							
SS-2	65 15	CL-ML, SILTY CLAY, some sand, little gravel, hard, brown	>4%			8.2			
SS-3	100 24	SP-SM, POORLY GRADED SAND with SILT, little gravel, medium dense, moist, brown, fine to medium grained							
SS-4	100 27	SM, SILTY SAND, trace gravel, medium dense, moist, brown, fine to medium grained							
SS-5	100 16	CH, FAT CLAY, little sand, trace gravel, very stiff, brown	2%			22.4			
SS-6	100 16	CL, SANDY CLAY, little gravel, hard, brown	>4%			14.0			
SS-7	95 59.4								
SS-8	85 59.5								
SS-9	100 59.2	WEATHERED SHALE, soft, brown to gray below 19 ft							
SS-10	100 59.3								
End of Boring at 23.8 ft									
*Seating increment									
WATER LEVEL OBSERVATIONS			GENERAL NOTES						
Depth ft	While Drilling	Upon Completion	Start 4/30/18 End 4/30/18 Rig CME 75 Drilling Method 3/4" I.D. HSA Truck						
To Water	NW	NW	Remarks: Backfilled with auger cuttings and bentonite chip plug, and the roadway was restored with a pavement patch.						
To Cave-in		23	The stratification lines represent the approximate boundary between soil/rock types and the transition may be gradual.						

SAMPLE		DESCRIPTION/CLASSIFICATION and REMARKS	SOIL PROPERTIES						
No.	Depth ft		q_u tsf	q_v tsf	γ pcf	W %	LL %	PL %	PI %
SS-1	60 13	ASPHALTIC CONCRETE							
		GRANULAR SUBBASE, (sand and gravel)							
SS-2	80 26	SP-SM, POORLY GRADED SAND with SILT, little gravel, loose, moist, brown, fine to medium grained	>4%			11.8	20	13	7
SS-3	80 4	CL, LEAN CLAY, little sand, trace gravel, medium stiff, brown	1%						
SS-4	5 11	CL, SANDY CLAY, little gravel, medium stiff, moist, brown, with cobble fragments							
SS-5	85 59.4								
SS-6	55 59.5								
SS-7	30 59.1	WEATHERED SHALE, soft, brown to gray below 14 ft, with sandstone seam near 17 ft							
SS-8	85 59.4								
SS-9	85 59.3								
SS-10	100 59.3								
End of Boring at 23.8 ft									
*Seating increment									
WATER LEVEL OBSERVATIONS			GENERAL NOTES						
Depth ft	While Drilling	Upon Completion	Start 4/30/18 End 4/30/18 Rig CME 75 Drilling Method 3/4" I.D. HSA Truck						
To Water	12	19	Remarks: Backfilled with auger cuttings and bentonite chip plug, and the roadway was restored with a pavement patch.						
To Cave-in		23%	The stratification lines represent the approximate boundary between soil/rock types and the transition may be gradual.						

SAMPLE		DESCRIPTION/CLASSIFICATION and REMARKS	SOIL PROPERTIES						
No.	Depth ft		q_u tsf	q_v tsf	γ pcf	W %	LL %	PL %	PI %
SS-1	50 31	ASPHALTIC CONCRETE							
		GRANULAR SUBBASE, (sand and gravel)							
SS-2	45 12	SP-SM, POORLY GRADED SAND with SILT, little gravel, dense, moist, brown, fine to medium grained	3%			22.3			
SS-3	100 7	CL, SANDY CLAY, little gravel, very stiff, brown							
SS-4	55 23	CL-ML, SILTY CLAY, some sand, little gravel, medium stiff to very stiff, brown	1%			12.1			
SS-5	100 23		2			10.0			
End of Boring at 12.5 ft									
WATER LEVEL OBSERVATIONS			GENERAL NOTES						
Depth ft	While Drilling	Upon Completion	Start 4/30/18 End 4/30/18 Rig CME 75 Drilling Method 3/4" I.D. HSA Truck						
To Water	NW	NW	Remarks: Backfilled with auger cuttings and bentonite chip plug, and the roadway was restored with a pavement patch.						
To Cave-in		10%	The stratification lines represent the approximate boundary between soil/rock types and the transition may be gradual.						

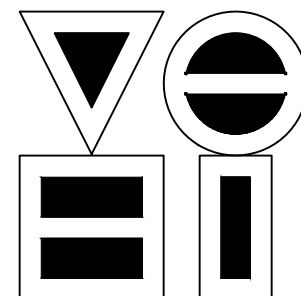
SAMPLE		DESCRIPTION/CLASSIFICATION and REMARKS	SOIL PROPERTIES						
No.	Depth ft		q_u tsf	q_v tsf	γ pcf	W %	LL %	PL %	PI %
SS-1	80 15	ASPHALTIC CONCRETE							
		GRANULAR SUBBASE, (sand and gravel)							
SS-2	80 12	CL-ML, SILTY CLAY, some sand, little gravel, hard, brown	>4%			11.4			
SS-3	100 6	CL, LEAN CLAY, little sand, little gravel, very stiff, brown	2			26.3	42	17	25
SS-4	100 7		1%			8.8			
SS-5	100 22	CL-ML, SILTY CLAY, some sand, little gravel, medium stiff to stiff, brown	1%			13.6			
End of Boring at 12.5 ft									
WATER LEVEL OBSERVATIONS			GENERAL NOTES						
Depth ft	While Drilling	Upon Completion	Start 4/30/18 End 4/30/18 Rig CME 75 Drilling Method 3/4" I.D. HSA Truck						
To Water	NW	8	Remarks: Backfilled with auger cuttings and bentonite chip plug, and the roadway was restored with a pavement patch.						
To Cave-in		11	The stratification lines represent the approximate boundary between soil/rock types and the transition may be gradual.						

SAMPLE		DESCRIPTION/CLASSIFICATION and REMARKS	SOIL PROPERTIES						
No.	Depth ft		q_u tsf	q_v tsf	γ pcf	W %	LL %	PL %	PI %
SS-1	65 13	ASPHALTIC CONCRETE							
		GRANULAR SUBBASE, (sand and gravel)							
SS-2	100 7	CH, FAT CLAY, little sand, little gravel, very stiff, brown	2			30.7			
SS-3	90 13	CL, SANDY CLAY, little gravel, stiff, brown	1%			23.3			
SS-4	40 7	SM, SILTY SAND, trace gravel, loose to medium dense, moist to wet below 10 ft, brown, fine to medium grained							
SS-5	100 18								
End of Boring at 12.5 ft									
WATER LEVEL OBSERVATIONS			GENERAL NOTES						
Depth ft	While Drilling	Upon Completion	Start 5/1/18 End 5/1/18 Rig CME 75 Drilling Method 3/4" I.D. HSA Truck						
To Water	10	7%	Remarks: Backfilled with auger cuttings and bentonite chip plug, and the roadway was restored with a pavement patch.						
To Cave-in		9	The stratification lines represent the approximate boundary between soil/rock types and the transition may be gradual.						

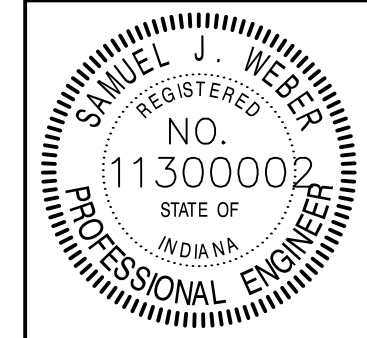
SAMPLE		DESCRIPTION/CLASSIFICATION and REMARKS	SOIL PROPERTIES						
No.	Depth ft		q_u tsf	q_v tsf	γ pcf	W %	LL %	PL %	PI %
SS-1	100 8	ASPHALTIC CONCRETE							
		GRANULAR SUBBASE, (sand and gravel)							
SS-2	80 10	CL, LEAN CLAY, little sand, little gravel, stiff, brown	1%			19.7			
SS-3	100 18	SP, POORLY GRADED SAND, little gravel, loose, wet, brown, fine to medium grained	>4%			8.1			
SS-4	85 9	CL-ML, SILTY CLAY, some sand, little gravel, very stiff to hard, gray	2%			10.6			
SS-5	100 18	SM, SILTY SAND, little gravel, medium dense, wet, gray and brown, fine to medium grained							
End of Boring at 12.5 ft									
WATER LEVEL OBSERVATIONS			GENERAL NOTES						
Depth ft	While Drilling	Upon Completion	Start 5/1/18 End 5/1/18 Rig CME 75 Drilling Method 3/4" I.D. HSA Truck						
To Water	4	2%	Remarks: Backfilled with auger cuttings and bentonite chip plug, and the roadway was restored with a pavement patch.						
To Cave-in		10	The stratification lines represent the approximate boundary between soil/rock types and the transition may be gradual.						

SAMPLE		DESCRIPTION/CLASSIFICATION and REMARKS	SOIL PROPERTIES						
No.	Depth ft		q_u tsf	q_v tsf	γ pcf	W %	LL %	PL %	PI %
SS-1	90 6	ASPHALTIC CONCRETE							
		GRANULAR SUBBASE, (sand and gravel)							
SS-2	100 8	CL-ML, SILTY CLAY, some sand, little gravel, stiff, brown, with fine to medium grained silty sand seam near 2 ft	1			10.6			
SS-3	100 9	CL, LEAN CLAY, little sand, little gravel, stiff, brown	1%			26.3			
SS-4	100 6	CL, SANDY CLAY, little gravel, medium stiff to very stiff, brown	1%			15.7			
SS-5	85 9		2			18.7			
End of Boring at 12.5 ft									
WATER LEVEL OBSERVATIONS			GENERAL NOTES						
Depth ft	While Drilling	Upon Completion	Start 5/1/18 End 5/1/18 Rig CME 75 Drilling Method 3/4" I.D. HSA Truck						
To Water	NW	NW	Remarks: Backfilled with auger cuttings and bentonite chip plug, and the roadway was restored with a pavement patch.						
To Cave-in		9%	The stratification lines represent the approximate boundary between soil/rock types and the transition may be gradual.						

DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\04-Details\
 FILE: 15-3371 Details.dwg
 DIMSCALE: 1/8" = 1'-0"
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 7:09pm



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RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	DESIGN ENGINEER	06/07/18
DESIGNED: KDK	DRAWN: KDK	CHECKED: SJW	CHECKED: SJW

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

SOIL BORING LOGS

HORIZONTAL SCALE	AS NOTED
VERTICAL SCALE	AS NOTED
SHEETS	114 of 126
PROJECT	15-3371

SAMPLE		DESCRIPTION/CLASSIFICATION and REMARKS	SOIL PROPERTIES					
No.	Depth ft		q_u tsf	q_{u1} tsf	γ pcf	W %	LL %	PL %
SS-1	40	ASPHALTIC CONCRETE GRANULAR SUBBASE, (sand and gravel)	1/2			15.1		
SS-2	55	CL SANDY CLAY, little to some gravel below 5 ft, soft to medium stiff, brown	1/4			10.9		
SS-3	80		1/4			17.7		
SS-4	65	CL-ML SILTY CLAY, some sand, little gravel, stiff to very stiff, brown	1 1/4			11.9		
SS-5	100		3			17.5		
SS-6	100	CL SANDY CLAY, little gravel, medium stiff, brown	1/2			13.9		
End of Boring at 15 ft								

WATER LEVEL OBSERVATIONS				GENERAL NOTES			
Depth ft	While Drilling	Upon Completion	After Drilling	Start	End	Rig	Remarks
To Water	NW	NW	BF	5/4/18	5/4/18	CME 75	Backfilled with auger cuttings and bentonite chip plug, and the roadway was restored with a pavement patch.
To Cave-in	14			The stratification lines represent the approximate boundary between soilrock types and the transition may be gradual.			

SAMPLE		DESCRIPTION/CLASSIFICATION and REMARKS	SOIL PROPERTIES					
No.	Depth ft		q_u tsf	q_{u1} tsf	γ pcf	W %	LL %	PL %
SS-1	100	ASPHALTIC CONCRETE GRANULAR SUBBASE, (sand and gravel)						
SS-2	55	SP-SM POORLY GRADED SAND with SILT, some gravel, loose to medium dense, moist to wet below 5 ft						
SS-3	100							
SS-4	50	SM SILTY SAND, some gravel, medium dense, wet, brown, with gravel seam near 11 ft, fine to medium grained						
SS-5	100	CL-ML SILTY CLAY, some sand, little gravel, hard, brown	>4 1/2			11.2		
SS-6	100	CL SANDY CLAY, little gravel, very stiff, brown	3			23.0		
SS-7	100	SP POORLY GRADED SAND, little gravel, medium dense to very dense, wet, gray, fine to medium grained						
SS-8	85							
SS-9	100	CL-ML SILTY CLAY, some sand, little gravel, very stiff to hard, gray	2			12.3		
SS-10	95		>4 1/2			8.9		
End of Boring at 24.7 ft								

WATER LEVEL OBSERVATIONS				GENERAL NOTES			
Depth ft	While Drilling	Upon Completion	After Drilling	Start	End	Rig	Remarks
To Water	5	8	BF	5/1/18	5/1/18	CME 75	Backfilled with auger cuttings and bentonite chip plug, and the roadway was restored with a pavement patch.
To Cave-in	16			The stratification lines represent the approximate boundary between soilrock types and the transition may be gradual.			

SAMPLE		DESCRIPTION/CLASSIFICATION and REMARKS	SOIL PROPERTIES					
No.	Depth ft		q_u tsf	q_{u1} tsf	γ pcf	W %	LL %	PL %
SS-1	65	ASPHALTIC CONCRETE GRANULAR SUBBASE, (sand and gravel)	2			9.0		
SS-2	0	CL SANDY CLAY, little gravel, very stiff, brown						
SS-3	85	CL LEAN CLAY, little sand, little gravel, stiff to medium stiff, brown	1			17.7		
SS-4	90		3			14.1		
SS-5	95	CL SANDY CLAY, little gravel, medium stiff to hard, brown, with silty clay seams near 12 ft and 14 ft	4 1/2			14.4		
SS-6	95		2			15.1		
SS-7	90		1 1/2			14.3		
SS-8	90	SM SILTY SAND, trace gravel, loose, wet, brown, fine to medium grained						
SS-9	95	SP POORLY GRADED SAND, little gravel, very dense, wet, gray, fine to medium grained						
SS-10	85	CL SANDY CLAY, little gravel, very stiff, gray	4			10.7		
End of Boring at 25 ft								

WATER LEVEL OBSERVATIONS				GENERAL NOTES			
Depth ft	While Drilling	Upon Completion	After Drilling	Start	End	Rig	Remarks
To Water	9 1/2	9	BF	5/2/18	5/2/18	CME 75	Backfilled with auger cuttings and bentonite chip plug, and the roadway was restored with a pavement patch.
To Cave-in	10 1/2			The stratification lines represent the approximate boundary between soilrock types and the transition may be gradual.			

SAMPLE		DESCRIPTION/CLASSIFICATION and REMARKS	SOIL PROPERTIES					
No.	Depth ft		q_u tsf	q_{u1} tsf	γ pcf	W %	LL %	PL %
SS-1	10	ASPHALTIC CONCRETE GRANULAR SUBBASE, (crushed stone)	1 1/2			28.7		
SS-2	35	CH FAT CLAY, little sand, little gravel, stiff, brown	1			28.4		
SS-3	100		4 1/2			13.3		
SS-4	85	CL SANDY CLAY, little gravel, very stiff to hard, brown	3			13.3		
SS-5	100		2 1/2			11.7		
SS-6	100	CL-ML SILTY CLAY, some sand, soft to hard, brown, with fine sand seams near 15 ft and 19 1/2 ft	1/2			11.9		
SS-7	90		>4 1/2			11.8		
SS-8	80		3			8.7		
End of Boring at 20 ft								

WATER LEVEL OBSERVATIONS				GENERAL NOTES			
Depth ft	While Drilling	Upon Completion	After Drilling	Start	End	Rig	Remarks
To Water	18	14	BF	5/4/18	5/4/18	CME 75	Backfilled with auger cuttings and bentonite chip plug, and the roadway was restored with a pavement patch.
To Cave-in	17			The stratification lines represent the approximate boundary between soilrock types and the transition may be gradual.			

SAMPLE		DESCRIPTION/CLASSIFICATION and REMARKS	SOIL PROPERTIES					
No.	Depth ft		q_u tsf	q_{u1} tsf	γ pcf	W %	LL %	PL %
SS-1	45	ASPHALTIC CONCRETE GRANULAR SUBBASE, (sand and gravel)	2 1/2			11.6		
SS-2	80	CL-ML SILTY CLAY, some sand, little gravel, very stiff, brown, with asphalt fragments (fill)	1/4			19.7		
SS-3	100	CL LEAN CLAY, little sand, little gravel, soft, brown	1 1/4			11.6		
SS-4	100	CL-ML SILTY CLAY, some sand, little gravel, stiff, brown	1 1/4			13.3		
SS-5	60		1 1/2			12.4		
End of Boring at 12.5 ft								

WATER LEVEL OBSERVATIONS				GENERAL NOTES			
Depth ft	While Drilling	Upon Completion	After Drilling	Start	End	Rig	Remarks
To Water	NW	NW	BF	5/4/18	5/4/18	CME 75	Backfilled with auger cuttings and bentonite chip plug, and the roadway was restored with a pavement patch.
To Cave-in	9 1/2			The stratification lines represent the approximate boundary between soilrock types and the transition may be gradual.			

SAMPLE		DESCRIPTION/CLASSIFICATION and REMARKS	SOIL PROPERTIES					
No.	Depth ft		q_u tsf	q_{u1} tsf	γ pcf	W %	LL %	PL %
SS-1	55	ASPHALTIC CONCRETE GRANULAR SUBBASE, (sand and gravel)	2 1/2			11.7		
SS-2	35	CL LEAN CLAY, little sand, little gravel, medium stiff to very stiff, brown, with fine sand seam near 4 1/2 ft	1/2			19.0		
SS-3	100		1 1/4			28.1		
SS-4	90	CL-ML SILTY CLAY, some sand, little gravel, stiff to hard, brown	>4 1/2			11.8		
SS-5	100		1 1/4			13.1		
End of Boring at 12.5 ft								

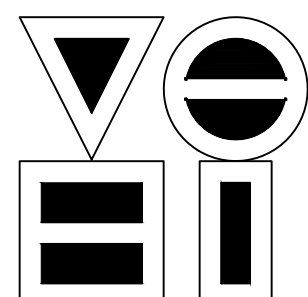
WATER LEVEL OBSERVATIONS				GENERAL NOTES			
Depth ft	While Drilling	Upon Completion	After Drilling	Start	End	Rig	Remarks
To Water	NW	NW	BF	5/4/18	5/4/18	CME 75	Backfilled with auger cuttings and bentonite chip plug, and the roadway was restored with a pavement patch.
To Cave-in	12			The stratification lines represent the approximate boundary between soilrock types and the transition may be gradual.			

SAMPLE		DESCRIPTION/CLASSIFICATION and REMARKS	SOIL PROPERTIES					
No.	Depth ft		q_u tsf	q_{u1} tsf	γ pcf	W %	LL %	PL %
SS-1	100	ASPHALTIC CONCRETE GRANULAR SUBBASE, (crushed stone)	1/4			15.4		
SS-2	100	CL-ML SILTY CLAY, some sand, little gravel, soft, moist, brown	2			20.4		
SS-3	100	CL LEAN CLAY, little sand, little gravel, very stiff, brown	2			10.9		
SS-4	100	SM SILTY SAND, little gravel, loose, moist, brown, fine to medium grained						
SS-5	100	CL-ML SILTY CLAY, some sand, little gravel, very stiff, brown	4			11.3		
End of Boring at 12.5 ft								

WATER LEVEL OBSERVATIONS				GENERAL NOTES			
Depth ft	While Drilling	Upon Completion	After Drilling	Start	End	Rig	Remarks
To Water	NW	NW	BF	5/1/18	5/1/18	CME 75	Backfilled with auger cuttings and bentonite chip plug, and the roadway was restored with a pavement patch.
To Cave-in	11 1/2			The stratification lines represent the approximate boundary between soilrock types and the transition may be gradual.			

SAMPLE		DESCRIPTION/CLASSIFICATION and REMARKS	SOIL PROPERTIES					
No.	Depth ft		q_u tsf	q_{u1} tsf	γ pcf	W %	LL %	PL %
SS-1	35	ASPHALTIC CONCRETE	1/2			12.7		
SS-2	70		1/2			13.8		
SS-3	90	CL SANDY CLAY, little gravel, soft to medium stiff, brown, with silty sand seams near 4 ft and 7 ft	1/2			17.1	23	10
SS-4	15							
SS-5	35	SP-SM POORLY GRADED SAND with SILT, little gravel, medium dense, wet, brown, with sandy clay seams, fine to medium grained						
End of Boring at 12.5 ft								

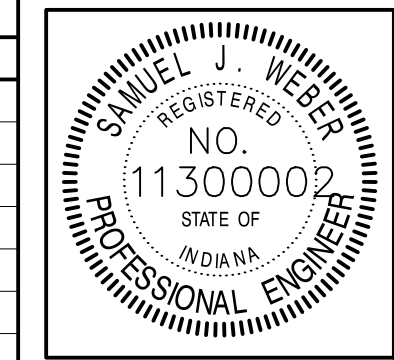
WATER LEVEL OBSERVATIONS				GENERAL NOTES			
Depth ft	While Drilling	Upon Completion	After Drilling	Start	End	Rig	Remarks
To Water	9	9	BF	5/2/18	5/2/18	CME 75	Backfilled with auger cuttings and bentonite chip plug, and the roadway was restored with a pavement patch.
To Cave-in	10			The stratification lines represent the approximate boundary between soilrock types and the transition may be gradual.			



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RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
DESIGNED:	KDK	DRAWN:
CHECKED:	SJW	CHECKED:
		DATE

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

SOIL BORING LOGS

HORIZONTAL SCALE	AS NOTED
VERTICAL SCALE	AS NOTED
SHEETS	115 of 126
PROJECT	15-3371

DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\04-Details\FILE: 15-3371 Details.dwg
 DIMSCALE: 1/8"=1'-0"
 PLOTTED BY: J.Mowery
 DATE: Jun 06 2018 - 7:10pm

SAMPLE		DESCRIPTION/CLASSIFICATION and REMARKS	SOIL PROPERTIES					
No.	Depth ft		q _s tsf	q _v tsf	f _v pdt	W %	LL %	PL %
SS-1	55	ASPHALTIC CONCRETE						
		CL-ML SILTY CLAY, some sand, some gravel, medium stiff, brown (fill)	1%			30.5		
SS-2	65	CL LEAN CLAY, little sand, little gravel, medium stiff to stiff, brown	2%			20.4		
SS-3	100	CL-ML SILTY CLAY, some sand, little gravel, medium stiff to stiff, brown	1%			12.2		
SS-4	95	SP-SM, POORLY GRADED SAND with SILT, little gravel, loose, moist, brown, fine to medium grained	1%			10.4		
SS-5	85	End of Boring at 12.5 ft						

SAMPLE		DESCRIPTION/CLASSIFICATION and REMARKS	SOIL PROPERTIES					
No.	Depth ft		q _s tsf	q _v tsf	f _v pdt	W %	LL %	PL %
SS-1	35	ASPHALTIC CONCRETE						
		CL-ML SILTY CLAY, some sand, some gravel, stiff, brown (fill)	3%			9.6		
SS-2	65	CL SANDY CLAY, little gravel, stiff to very stiff, brown, with silty clay seams near 5 ft and 7 ft	1%			22.2		
SS-3	85	CL SANDY CLAY, little gravel, stiff to very stiff, brown, with silty clay seams near 5 ft and 7 ft	3%			13.6		
SS-4	100	CL SANDY CLAY, little gravel, stiff, brown	2%			13.3		
SS-5	100	CL SANDY CLAY, little gravel, stiff, brown	3%			11.9		
SS-6	20	CL-ML SILTY CLAY, some sand, very stiff to hard, brown	>4%			13.3		
SS-7	45	End of Boring at 20 ft						

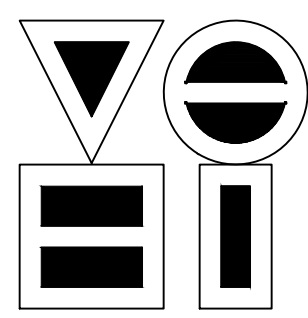
SAMPLE		DESCRIPTION/CLASSIFICATION and REMARKS	SOIL PROPERTIES					
No.	Depth ft		q _s tsf	q _v tsf	f _v pdt	W %	LL %	PL %
SS-1	65	ASPHALTIC CONCRETE						
		CL SANDY CLAY, little gravel, very stiff, brown	3%			20.4		
SS-2	65	CL-ML SILTY CLAY, some sand, little gravel, very stiff, brown, with fine sand seam near 7 ft	2%			11.6		
SS-3	100	CL-ML SILTY CLAY, some sand, little gravel, very stiff, brown, with fine sand seam near 7 ft	2%			11.4		
SS-4	90	CL SANDY CLAY, little gravel, stiff, brown	1%			12.8		
SS-5	0	CL SANDY CLAY, little gravel, stiff, brown	---			---		
SS-6	85	CL-ML SILTY CLAY, some sand, little gravel, hard, brown	>4%			7.3		
SS-7	85	CL-ML SILTY CLAY, some sand, little gravel, hard, brown	>4%			7.3		
SS-8	95	CL SANDY CLAY, little gravel, very stiff to hard, brown	3%			11.0		
SS-8	95	CL SANDY CLAY, little gravel, very stiff to hard, brown	>4%			8.5		

SAMPLE		DESCRIPTION/CLASSIFICATION and REMARKS	SOIL PROPERTIES					
No.	Depth ft		q _s tsf	q _v tsf	f _v pdt	W %	LL %	PL %
SS-1	45	ASPHALTIC CONCRETE						
		CL-ML SILTY CLAY, some sand, little gravel, hard, brown (fill)	>4%			12.7		
SS-2	55	CL SANDY CLAY, little gravel, very stiff to hard, brown	2%			23.4		
SS-3	85	CL LEAN CLAY, little sand, little gravel, soft to very stiff, brown	1%			26.8		
SS-4	35	CL SANDY CLAY, little gravel, very stiff, brown	3%			14.5		
SS-5	95	CL SANDY CLAY, little gravel, very stiff, brown	2%			15.6		
SS-6	85	SM SILTY SAND, little gravel, loose, moist, brown, fine to medium grained	---			---		
SS-6	85	CL-ML SILTY CLAY, some sand, little gravel, hard, brown	>4%			10.6		
SS-7	95	CL SANDY CLAY, little gravel, very stiff, brown to gray below 19 ft, with fine to medium sand seam near 17 ft	3%			10.6		
SS-8	95	CL SANDY CLAY, little gravel, very stiff, brown to gray below 19 ft, with fine to medium sand seam near 17 ft	2%			9.8		

SAMPLE		DESCRIPTION/CLASSIFICATION and REMARKS	SOIL PROPERTIES					
No.	Depth ft		q _s tsf	q _v tsf	f _v pdt	W %	LL %	PL %
SS-1	100	ASPHALTIC CONCRETE						
		GRANULAR SUBBASE, (sand and gravel)						
SS-2	45	CL LEAN CLAY, little sand, little gravel, stiff, brown	1%			25.0		
SS-3	45	CL SANDY CLAY, little gravel, soft to medium stiff, brown	1%			11.9		
SS-4	100	CL SANDY CLAY, little gravel, soft to medium stiff, brown	1%			11.8		
SS-4	100	CL SANDY CLAY, little gravel, soft to medium stiff, brown	3%			11.1		
SS-5	100	CL-ML SILTY CLAY, some sand, little gravel, medium stiff to hard, brown	>4%			11.1		
SS-6	45	CL-ML SILTY CLAY, some sand, little gravel, medium stiff to hard, brown	1%			11.5		

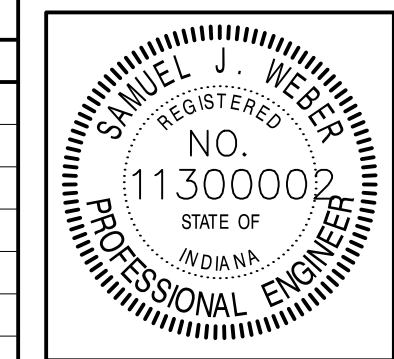
SAMPLE		DESCRIPTION/CLASSIFICATION and REMARKS	SOIL PROPERTIES					
No.	Depth ft		q _s tsf	q _v tsf	f _v pdt	W %	LL %	PL %
SS-1	100	ASPHALTIC CONCRETE						
		GRANULAR SUBBASE, (crushed stone)						
SS-2	90	CL LEAN CLAY, little sand, little gravel, stiff, brown	1%			20.4		
SS-3	100	CL LEAN CLAY, little sand, little gravel, stiff, brown	1%			20.1		
SS-3	100	CL LEAN CLAY, little sand, little gravel, stiff, brown	3%			12.5		
SS-4	100	CL-ML SILTY CLAY, some sand, little gravel, very stiff to hard, brown	4%			9.3		
SS-5	100	CL-ML SILTY CLAY, some sand, little gravel, very stiff to hard, brown	>4%			10.2		

DIRECTORY: F:\2015\15-3371 SR32 Collection System and Septage Receiving Station\DESIGN\Drawings\04-Detail\ VS ENGINEERING, INC. 3371 Details.dwg
 DIMSCALE: 1/8" = 1' LTSCALE: 0.5
 PLOTTED BY: JMowery
 DATE: Jun 06, 2018 - 7:10pm



VS ENGINEERING, INC.

4275 North High School Road
 vs@vsengineering.com www.vsengineering.com
 Phone: (317) 293-3542 Fax: (317) 293-4737

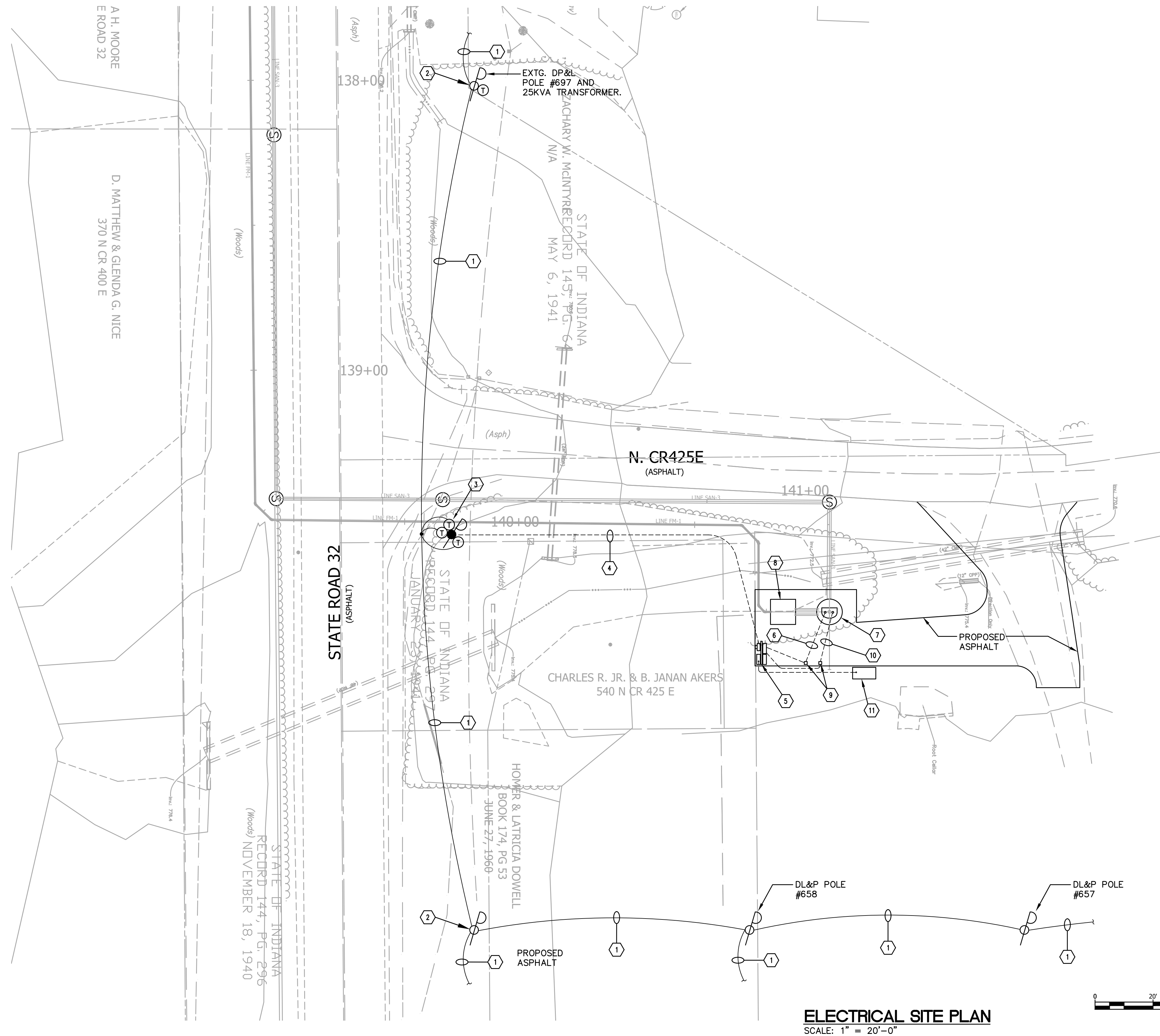


RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	06/07/18
	DESIGN ENGINEER	DATE
DESIGNED: KDK	DRAWN: KDK	
CHECKED: SJW	CHECKED: SJW	

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

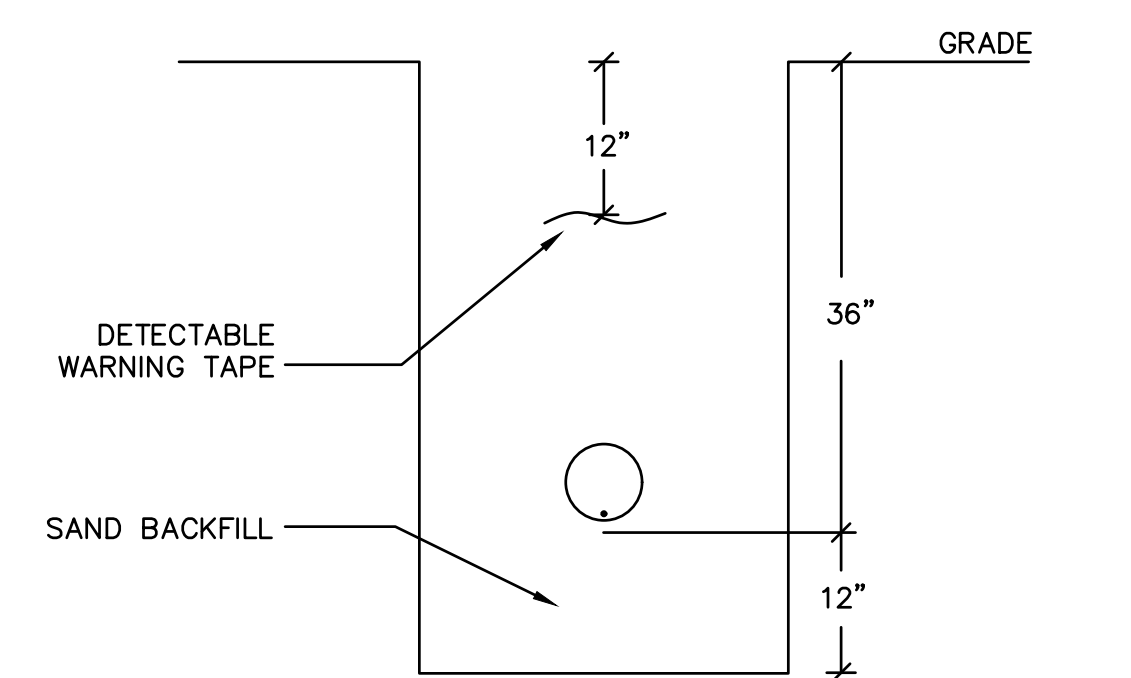
SOIL BORING LOGS

HORIZONTAL SCALE	AS NOTED
VERTICAL SCALE	AS NOTED
SHEETS	116 of 126
PROJECT	15-3371



- GENERAL ELECTRICAL NOTES:**
- CONTRACTOR SHALL COORDINATE ALL REQUIREMENTS FOR NEW SERVICE WITH LOCAL UTILITY. UTILITY FEES TO BE INCLUDED BY CONTRACTOR.
-CUSTOMER: MONTGOMERY COUNTY
-ELECTRICAL UTILITY: DARLINGTON LIGHT & POWER
"GREG GAVIER"
 - SEE ONE LINE DIAGRAM FOR ADDITIONAL DETAILS AND REQUIREMENTS.
 - PROVIDE LINK SEAL WITH STAINLESS HARDWARE FOR ALL CONDUIT PENETRATIONS INTO LIFT STATION WET WELL.
 - 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.
 - WET WELL CLASSIFICATION IS CLASS 1 DIVISION 1 GROUP D; ALL WIRING METHODS SHALL COMPLY.
 - WITHIN A 5' RADIUS OF ANY VENTED OPENING ATTACHED TO THE WET WELL SHALL BE CLAS 1 DIVISION 1 GROUP D RATED.

- ELECTRICAL KEYED NOTES:**
- EXISTING UTILITY COMPANY 3Ø OVERHEAD AERIAL PRIMARY DISTRIBUTION LINE.
 - EXISTING UTILITY CO. POLE TO REMAIN.
 - NEW UTILITY CO. POLE AND TRANSFORMER BANK. SEE SINGLE LINE DIAGRAM.
 - NEW U.G. SECONDARY. SCH 80 4" PVC CONDUIT MINIMUM OF 36" BELOW FINISHED GRADE FURNISHED AND INSTALLED BY E.C. SEE DUCT BANK DETAIL THIS SHEET AND ONE LINE DIAGRAM FOR ADDITIONAL INFORMATION. COORDINATE INSTALLATION WITH THE UTILITY COMPANY.
 - NEW EQUIPMENT RACK, FURNISHED AND INSTALLED BY CONTRACTOR. SEE DETAIL.
 - NEW PUMP #1 POWER AND CONTROLS, PUMP #2 POWER AND CONTROLS, AND FLOAT SENSOR CONTROL CIRCUITS EACH IN OWN CONDUIT. SEE ONE-LINE DIAGRAM.
 - NEW SANITARY WET WELL.
 - NEW VALVE VAULT.
 - NEW VENTED TERMINAL BOX FOR POWER AND CONTROL CABLING SEE DETAIL.
 - NEW LEVEL SENSOR CONTROL CIRCUIT. MAINTAIN MINIMUM 3FT. CLEARANCE FROM POWER CONDUIT. WHEN PASSING OVER POWER CONDUITS IT SHALL BE AT 90° ANGLES.
 - NEW 60KW STANDBY DIESEL GENERATOR 277/480V-3Ø-4W SEE SINGLE LINE DIAGRAM.

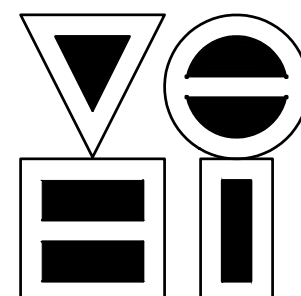


ELECT. SERVICE LATERAL DUCT BANK
NO SCALE

ELECTRICAL SITE PLAN
SCALE: 1" = 20'-0"



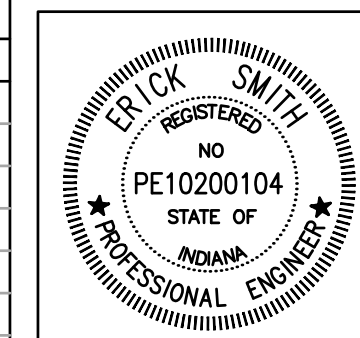
SIMS-DURKIN ASSOCIATES
ENGINEERING COMPANY
1545 COUNTRY CLUB ROAD INDIANAPOLIS, INDIANA 46234
PHONE: (317)209-4035 WEBSITE: WWW.SIMS-DURKIN.COM



VS ENGINEERING, INC.

4275 North High School Road
vsei@vsengineering.com
Phone: (317) 293-3542

Indianapolis, Indiana 46254
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Fax: (317) 293-4737



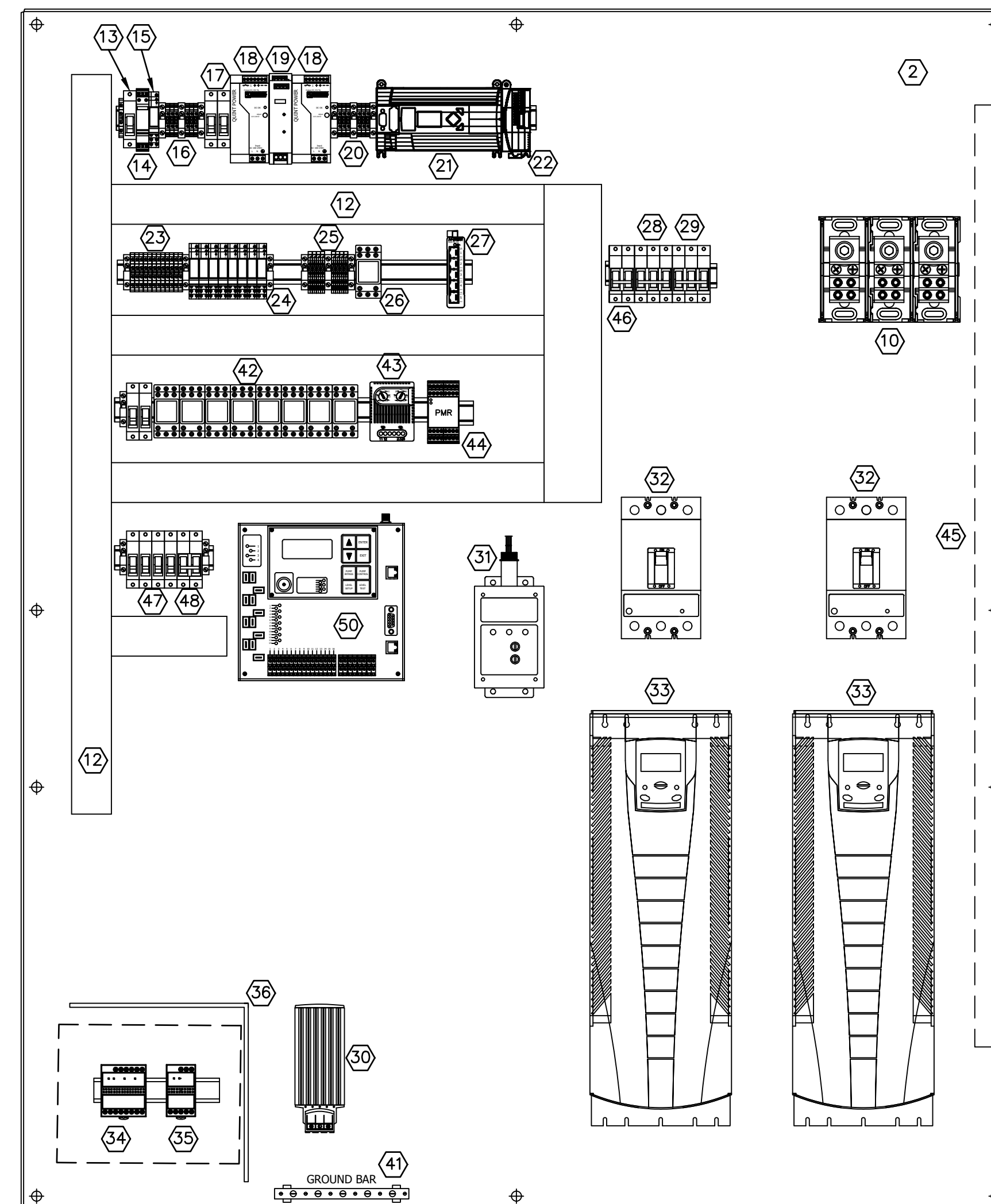
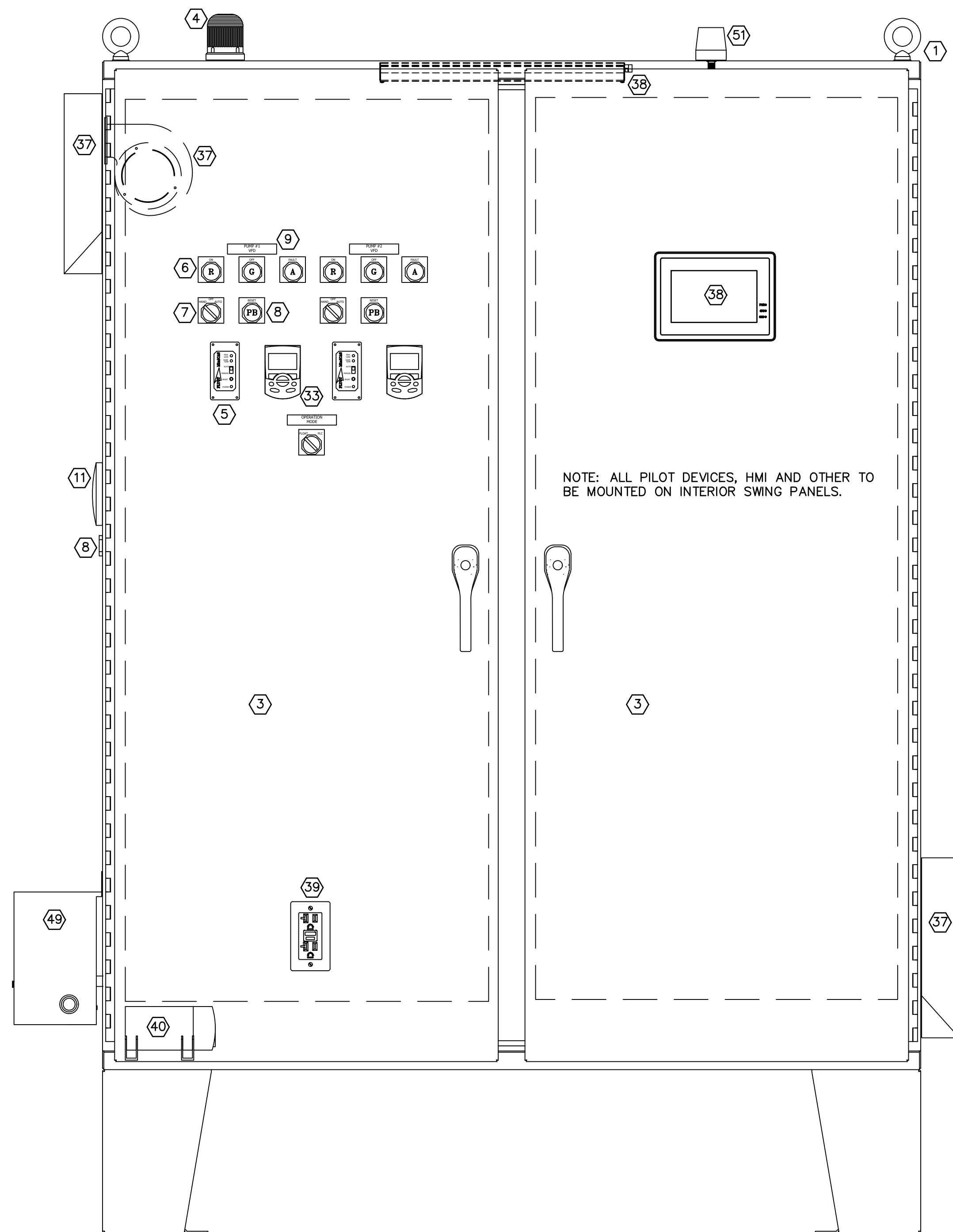
RECOMMENDED FOR APPROVAL: *M.W.E. JR.* 05/25/2018
DESIGN ENGINEER DATE

DESIGNED: MWE/JR DRAWN: MWE/JR
CHECKED: ES CHECKED: ES

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM		HORIZONTAL SCALE 1" = 20'
EAST LIFT STATION SITE PLAN		VERTICAL SCALE N/A
117 of 126 SHEETS		PROJECT 15-3371

ELECTRICAL KEYED NOTES: ☒

1. NEMA 4X STAINLESS STEEL ENCLOSURE, 72"x60"x16" MINIMUM. WITH 3 POINT LATCH AND LOCKABLE HANDLE.
2. 72"x60" EQUIPMENT PANEL.
3. SWING PANELS, INCLUDE SWING PANEL KIT.
4. ALARM BEACON, STROBE LIGHT.
5. FLYGT MINICAS II FLUSH MOUNT SEAL FAIL RELAY. RELAY SHALL INCLUDE RESET BUTTON, LOCAL SEAL FAIL, OVER TEMP AND POWER INDICATORS.
6. GREEN PUSH-TO-TEST AND AMBER PUSH-TO-TEST PILOT LIGHTS, TYPICAL FOR EACH PUMP. 30.5MM NEMA4X.
7. 3 POSITION HOA SWITCH, TYPICAL FOR EACH PUMP. 30.5MM NEMA4X.
8. PUSHBUTTON FOR ALARM RESET/HORN SILENCE. 30.5MM NEMA4X.
9. NAME PLATES. WHITE WITH BLACK LETTERS.
10. 400A DISTRIBUTION BLOCK.
11. NEMA 4X ALARM HORN.
12. WIRE DUCT - AS NEEDED.
13. 1 POLE 120VAC 20A CONTROL POWER CIRCUIT BREAKER.
14. 120V SURGE PROTECTION - PANEL POWER.
15. 120V PANEL CONTROL POWER FAIL RELAY.
16. 120V HOT/NEUTRAL DISTRIBUTION TERMINAL BLOCKS.
17. 3A 1P 24VDC POWER SUPPLY CIRCUIT BREAKERS.
18. 5A 24VDC REDUNDANT POWER SUPPLIES.
19. POWER SUPPLY REDUNDANCY MODULE.
20. 24VDC +/- DISTRIBUTION TERMINAL BLOCKS.
21. MICROLOGIX 1400 CONTROLLER.
22. MICROLOGIX 1400 ANALOG INPUT MODULE.
23. DIGITAL INPUT FIELD TERMINAL BLOCKS.
24. DIGITAL OUTPUT ISOLATION RELAYS.
25. ANALOG TERMINAL BLOCKS WITH OPTO ISOLATION.
26. UPS BYPASS RELAY.
27. 5 PORT ETHERNET SWITCH.
28. 3P 15A CIRCUIT BREAKER FOR PHASE FAIL RELAY.
29. 3P 30A CIRCUIT BREAKER FOR 3 PHASE SPD.
30. PANEL CONDENSATION HEATER.
31. 3 PHASE SURGE PROTECTION DEVICE (SPD).
32. 100A MOLDED CASE MOTOR PROTECTION CIRCUIT BREAKER
33. ABB ACQ550 SERIES 40HP (34HP MOTORS) IP21/UL TYPE 1 VFD OR APPROVED EQUAL.
34. FLOAT SWITCH INTRINSICALLY SAFETY BARRIER.
35. SUBMERSIBLE LEVEL TRANSMITTER INTRINSICALLY SAFETY BARRIER.
36. INTRINSICALLY SAFE AREA.
37. COOLING FAN SIZED APPROPRIATELY FOR ENCLOSURE SIZE AND HEAT DISSIPATION OF ALL COMPONENTS. NEMA4X RATED EXHAUST AND INTAKE VENTS.
38. 7" TOUCH SCREEN HMI, SIMILAR TO MAPLE SYSTEMS HMI5070P.
39. GFI COURTESY OUTLET.
40. 800VA MINIMUM TRUE ONLINE UPS FOR PLC AND HMI BACKUP.
41. GROUND BUS BAR.
42. CONTROL RELAYS.
43. DUAL THERMOSTAT FOR HEAT/COOL.
44. PHASE FAIL MONITOR.
45. 3PHASE UTILITY POWER.
46. 2P TRANSFORMER CIRCUIT BREAKER.
47. 1P SUPPLEMENTAL CIRCUIT BREAKERS: 20A GENERATOR BATTERY CHARGER, 20A FOR REMOTE OMNI SITE PANEL, 20A FOR RECEPTACLE AND 20A FOR SITE LIGHTING.
48. 2P 20A CIRCUIT BREAKER FOR GENERATOR BLOCK HEATER.
49. 2KVA EXTERNAL MOUNT SS TRANSFORMER - 480V/120V.
50. OMNISITE XR50 CELLULAR ALARM SYSTEM.
51. 4DBI CELLULAR ANTENNA.

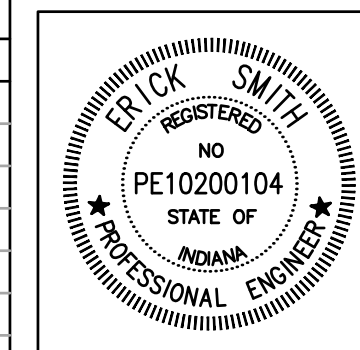
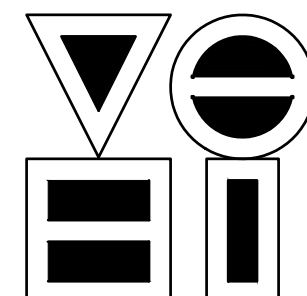


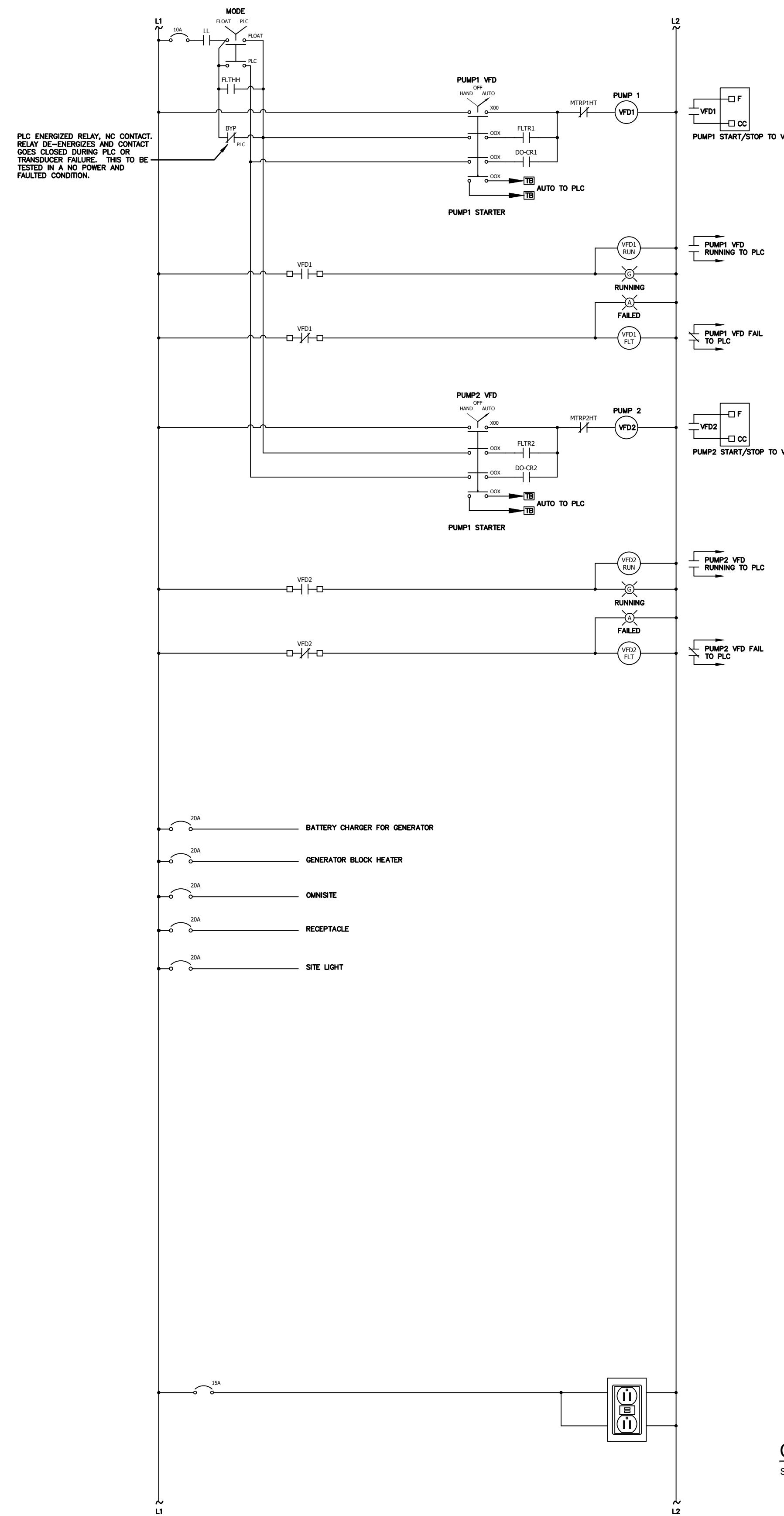
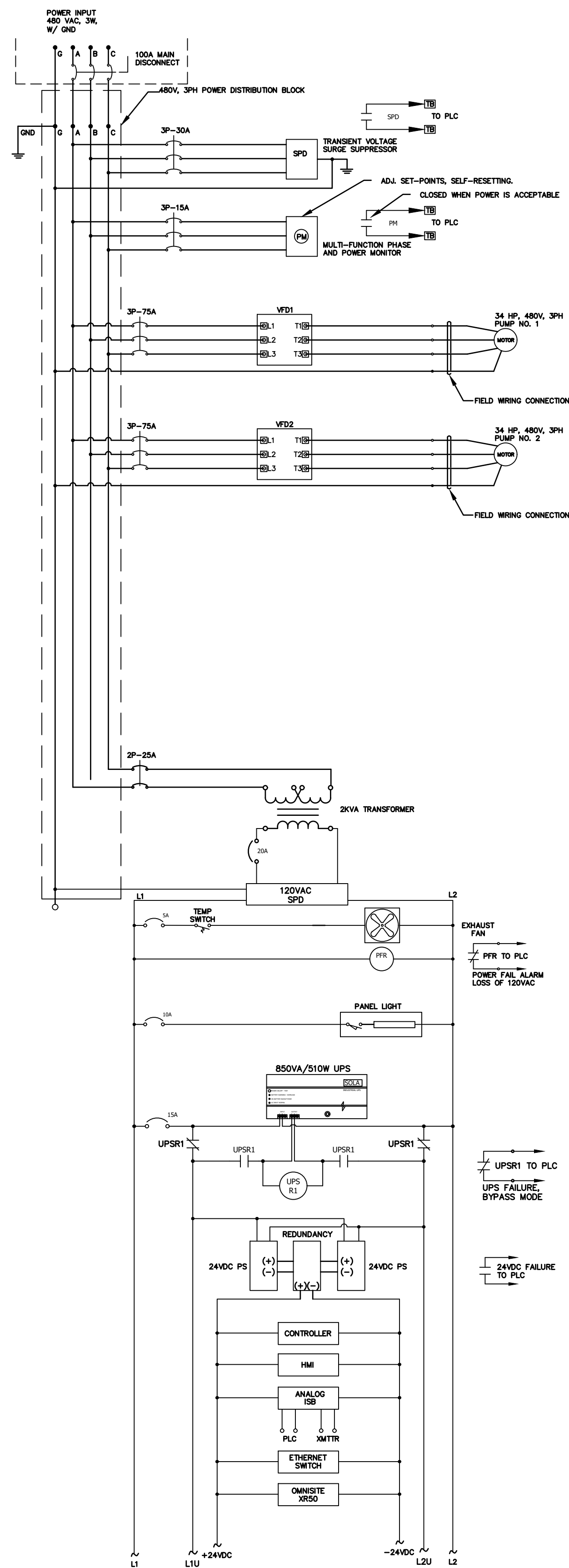
**EAST LIFT STATION CONTROL PANEL LAYOUT
DETAILS**

SCALE: NONE

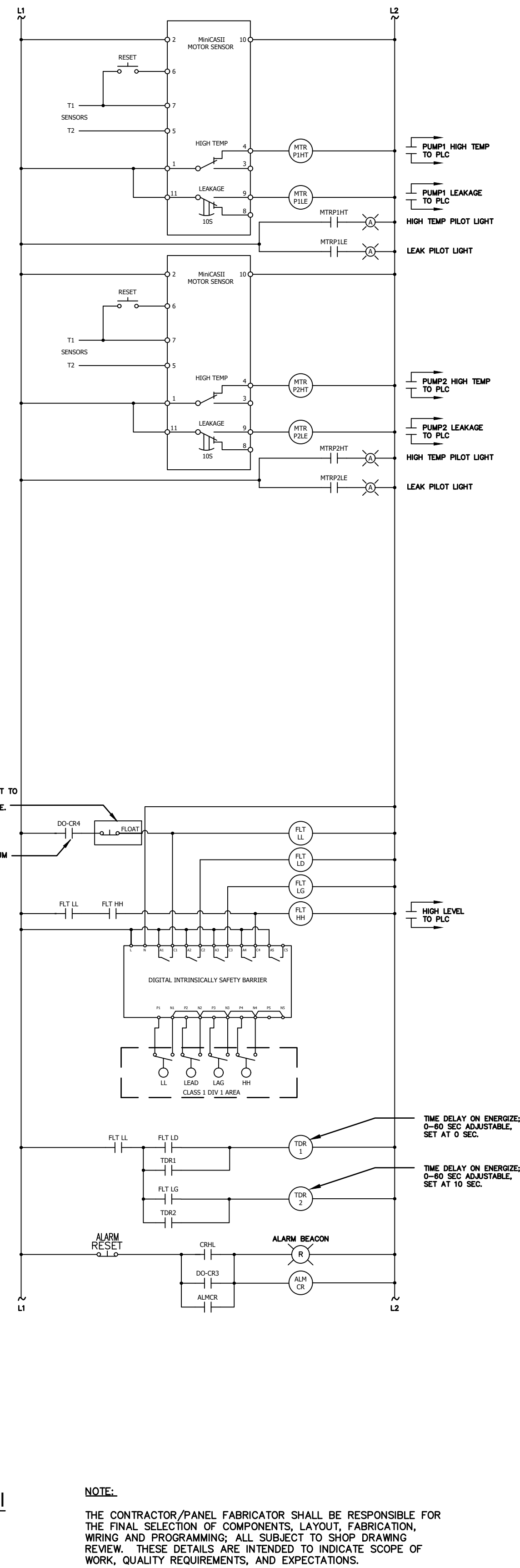
GENERAL ELECTRICAL NOTE:

THE CONTRACTOR/PANEL FABRICATOR SHALL BE RESPONSIBLE FOR THE FINAL SELECTION OF COMPONENTS, LAYOUT, FABRICATION, WIRING AND PROGRAMMING; ALL SUBJECT TO SHOP DRAWING REVIEW. THESE DETAILS ARE INTENDED TO INDICATE SCOPE OF WORK, QUALITY REQUIREMENTS, AND EXPECTATIONS.



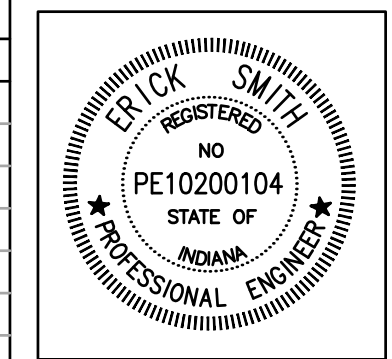


PLC ENERGIZED RELAY, NO CONTACT. RELAY DE-ENERGIZES AND CONTACT GOES CLOSED DURING PLC OR TRANSDUCER FAILURE. THIS TO BE TESTED IN A NO POWER AND FAULTED CONDITION.



CONTROL PANEL WIRING DIAGRAM I
SCALE: NONE

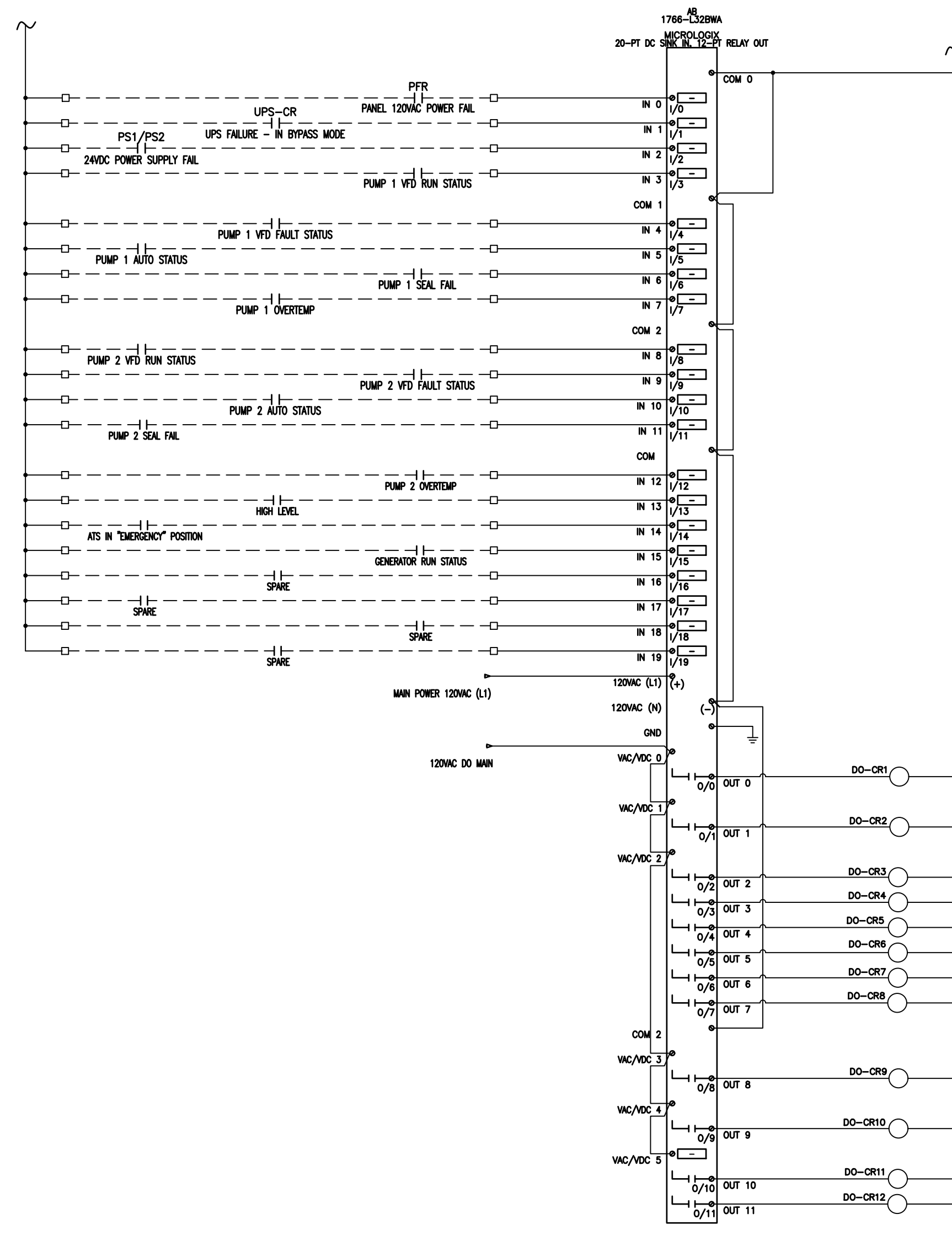
NOTE:
THE CONTRACTOR/PANEL FABRICATOR SHALL BE RESPONSIBLE FOR THE FINAL SELECTION OF COMPONENTS, LAYOUT, FABRICATION, WIRING AND PROGRAMMING; ALL SUBJECT TO SHOP DRAWING REVIEW. THESE DETAILS ARE INTENDED TO INDICATE SCOPE OF WORK, QUALITY REQUIREMENTS, AND EXPECTATIONS.



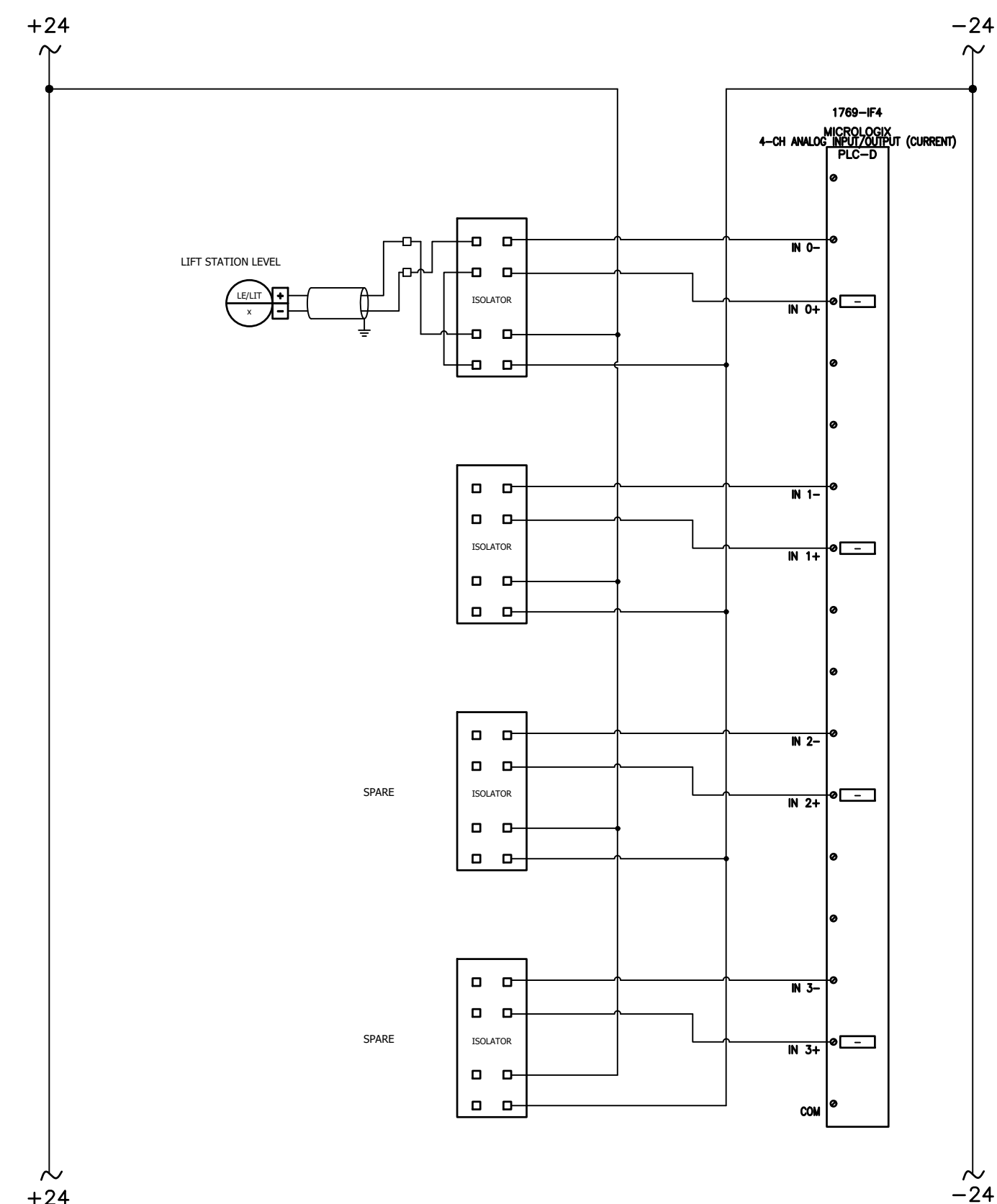
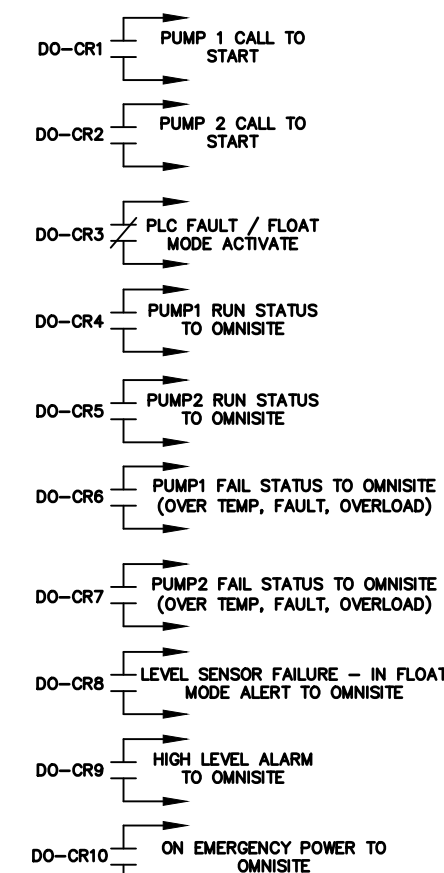
RECOMMENDED FOR APPROVAL	<i>M. W. E. J. R.</i> DESIGN ENGINEER	05/25/2018 DATE
DESIGNED:	MWE/JR	DRAWN: MWE/JR
CHECKED:	ES	CHECKED: ES

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
EAST LIFT STATION
PUMP CONTROL PANEL WIRING

HORIZONTAL SCALE	N/A
VERTICAL SCALE	N/A
SHEETS	119 of 126
PROJECT	15-3371



DIGITAL INPUT/OUTPUT BASE WIRING



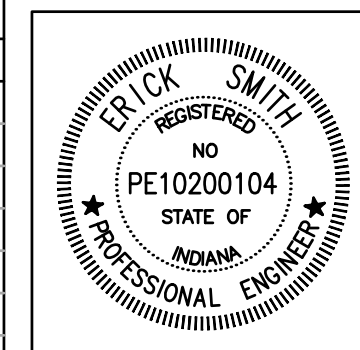
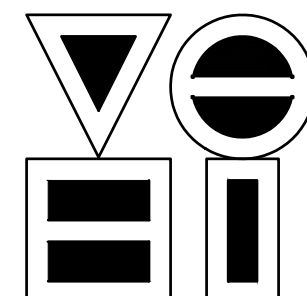
ANALOG INPUT MODULE 1 WIRING DETAIL

CONTROL PANEL WIRING DIAGRAM

SCALE: NONE

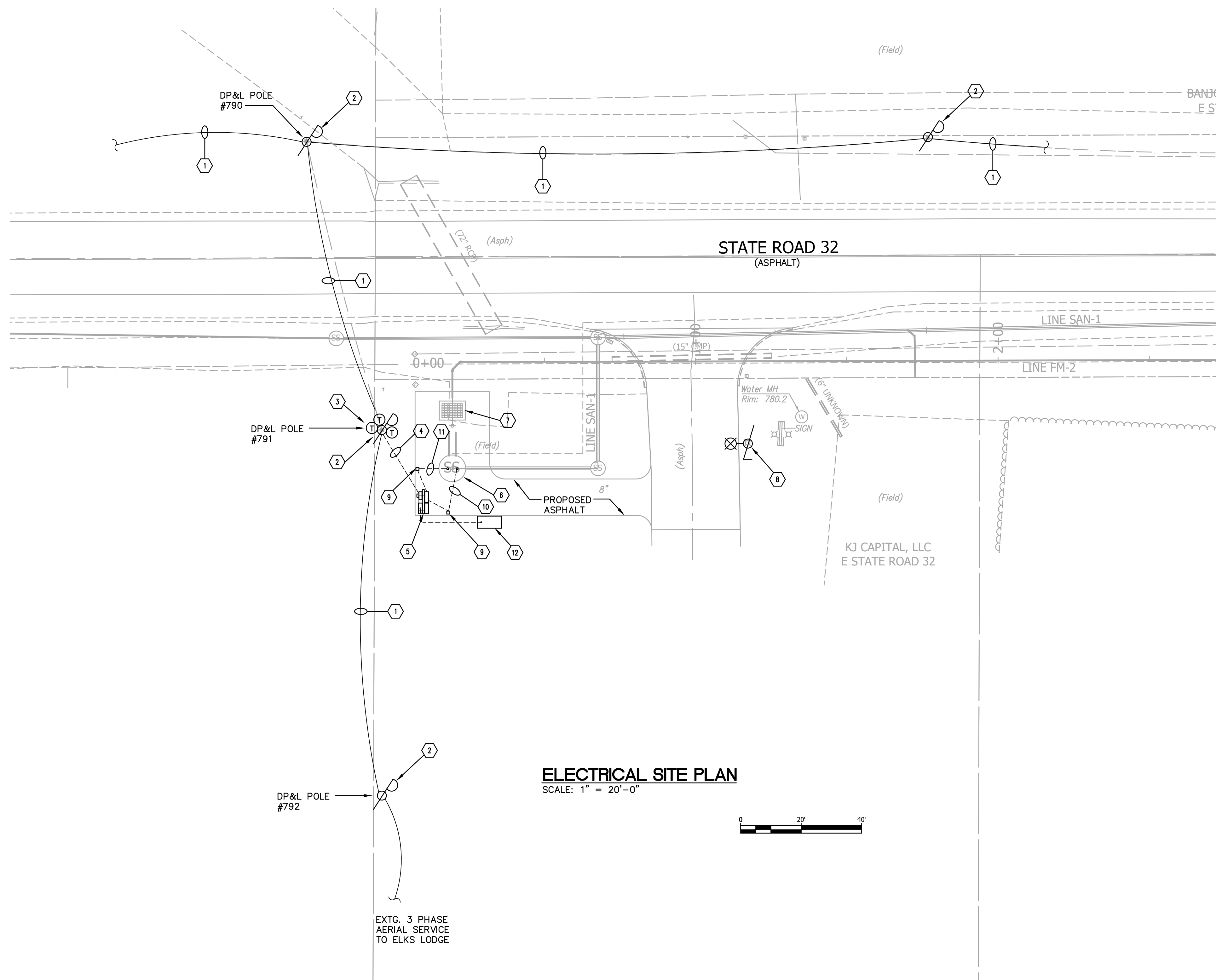
NOTE:

THE CONTRACTOR/PANEL FABRICATOR SHALL BE RESPONSIBLE FOR THE FINAL SELECTION OF COMPONENTS, LAYOUT, FABRICATION, WIRING AND PROGRAMMING; ALL SUBJECT TO SHOP DRAWING REVIEW. THESE DETAILS ARE INTENDED TO INDICATE SCOPE OF WORK, QUALITY REQUIREMENTS, AND EXPECTATIONS.



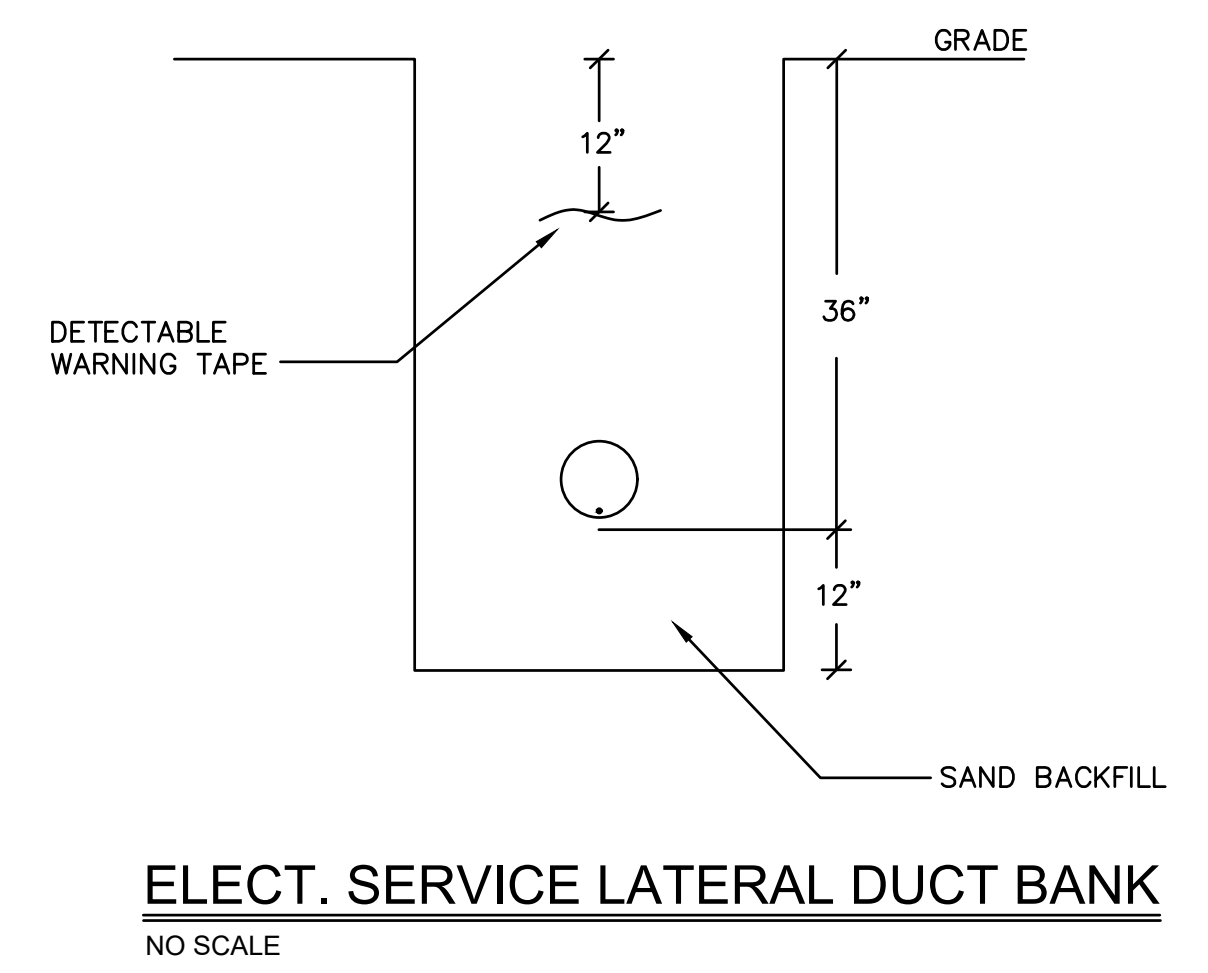
RECOMMENDED FOR APPROVAL	<i>Erick Smith</i> DESIGN ENGINEER	05/25/2018 DATE
DESIGNED:	MWE/JR	DRAWN: MWE/JR
CHECKED:	ES	CHECKED: ES

HORIZONTAL SCALE	N/A
VERTICAL SCALE	N/A
SHEETS	120 of 126
PROJECT	15-3371



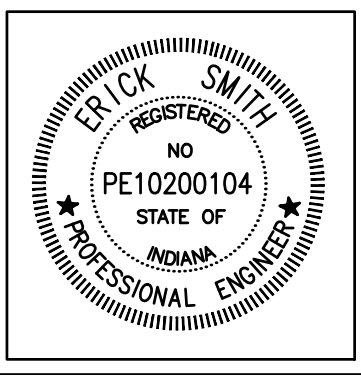
- GENERAL ELECTRICAL NOTES:**
- A. CONTRACTOR SHALL COORDINATE ALL REQUIREMENTS FOR NEW SERVICE WITH LOCAL UTILITY. UTILITY FEES TO BE INCLUDED BY CONTRACTOR.
-CUSTOMER: MONTGOMERY COUNTY
-ELECTRICAL UTILITY: DARLINGTON LIGHT & POWER "GREG GAVIER"
 - B. SEE ONE LINE DIAGRAM FOR ADDITIONAL DETAILS AND REQUIREMENTS.
 - 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 1 GROUP D RATED.

- ELECTRICAL KEYED NOTES:**
- 1. EXISTING UTILITY COMPANY OVERHEAD 3 PHASE AERIAL PRIMARY DISTRIBUTION LINE.
 - 2. EXISTING UTILITY CO. POLE TO REMAIN..
 - 3. NEW UTILITY CO. TRANSFORMER BANK MOUNTED ON EXISTING UTILITY CO. POLE. SEE SINGLE LINE DIAGRAM.
 - 4. NEW U.G. SECONDARY. SCH 80 4" PVC CONDUIT MINIMUM OF 36" BELOW FINISHED GRADE FURNISHED AND INSTALLED BY E.C. SEE DUCT BANK DETAIL THIS SHEET AND ONE LINE DIAGRAM FOR ADDITIONAL INFORMATION. COORDINATE INSTALLATION WITH THE UTILITY COMPANY.
 - 5. NEW EQUIPMENT RACK, FURNISHED AND INSTALLED BY CONTRACTOR. SEE DETAIL.
 - 6. NEW SANITARY MANHOLE.
 - 7. NEW VALVE VAULT.
 - 8. EXISTING STREET LIGHT AND POLE TO REMAIN.
 - 9. NEW VENTED TERMINAL BOX FOR POWER AND CONTROL CABLING. SEE DETAIL.
 - 10. NEW LEVEL SENSOR CONTROL CIRCUIT. MAINTAIN MINIMUM 3FT. CLEARANCE FROM POWER CONDUIT. WHEN PASSING OVER POWER CONDUITS IT SHALL BE AT 90° ANGLES.
 - 11. NEW PUMP #1 POWER AND CONTROLS, PUMP #2 POWER AND CONTROLS, AND FLOAT SENSOR CONTROL CIRCUITS. EACH IN OWN CONDUIT. SEE ONE-LINE DIAGRAM.
 - 12. NEW 60KW DIESEL STANDBY GENERATOR 277/480V 3ø-4W SEE SINGLE LINE DIAGRAM.



SIMS-DURKIN ASSOCIATES
ENGINEERING COMPANY
1545 COUNTRY CLUB ROAD INDIANAPOLIS, INDIANA 46234
PHONE: (317)209-4035 WEBSITE: WWW.SIMS-DURKIN.COM

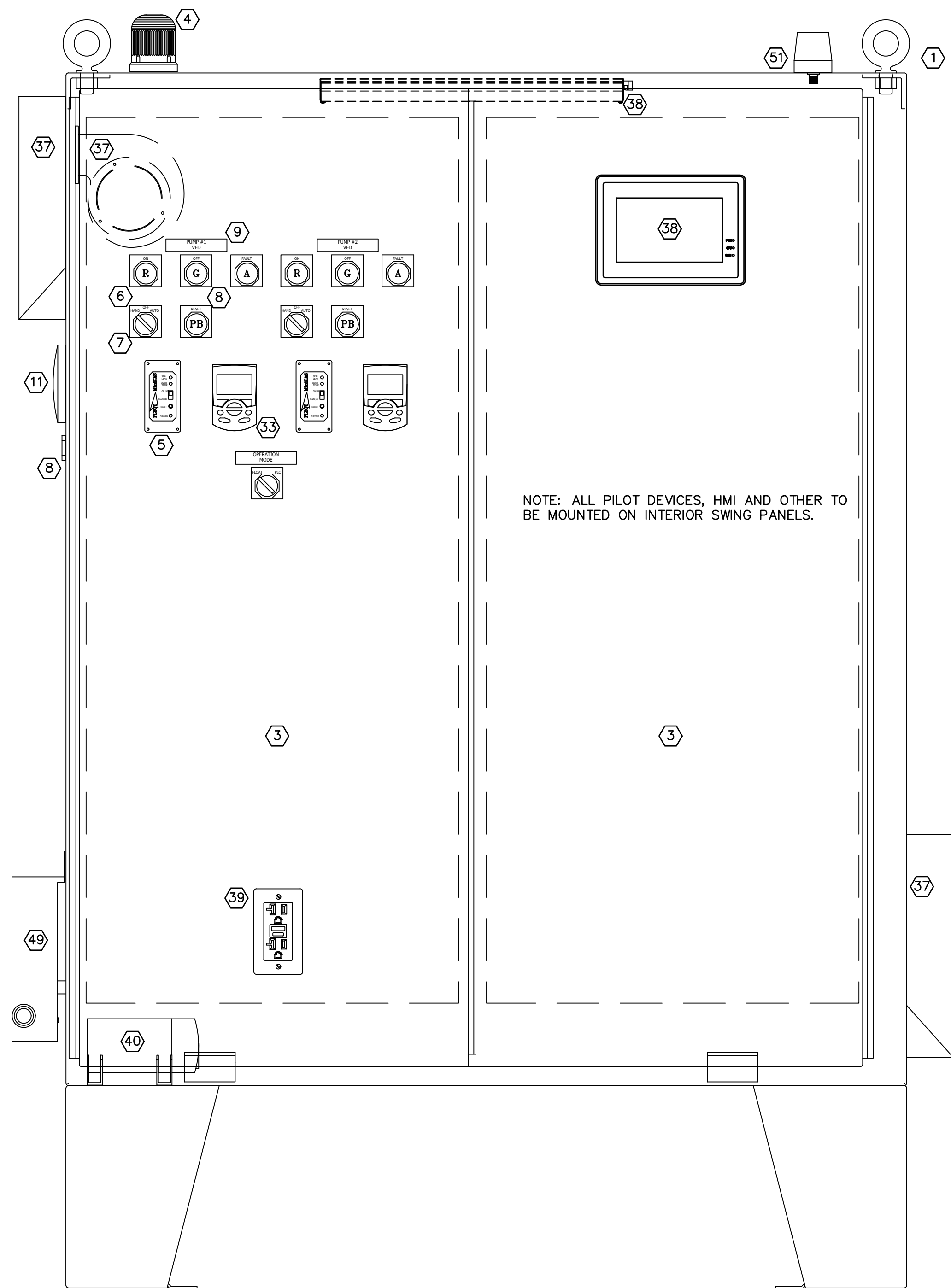
VS ENGINEERING, INC.
4275 North High School Road Indianapolis, Indiana 46254
vsei@vsengineering.com www.vsengineering.com
Phone: (317) 293-3542 Fax: (317) 293-4737



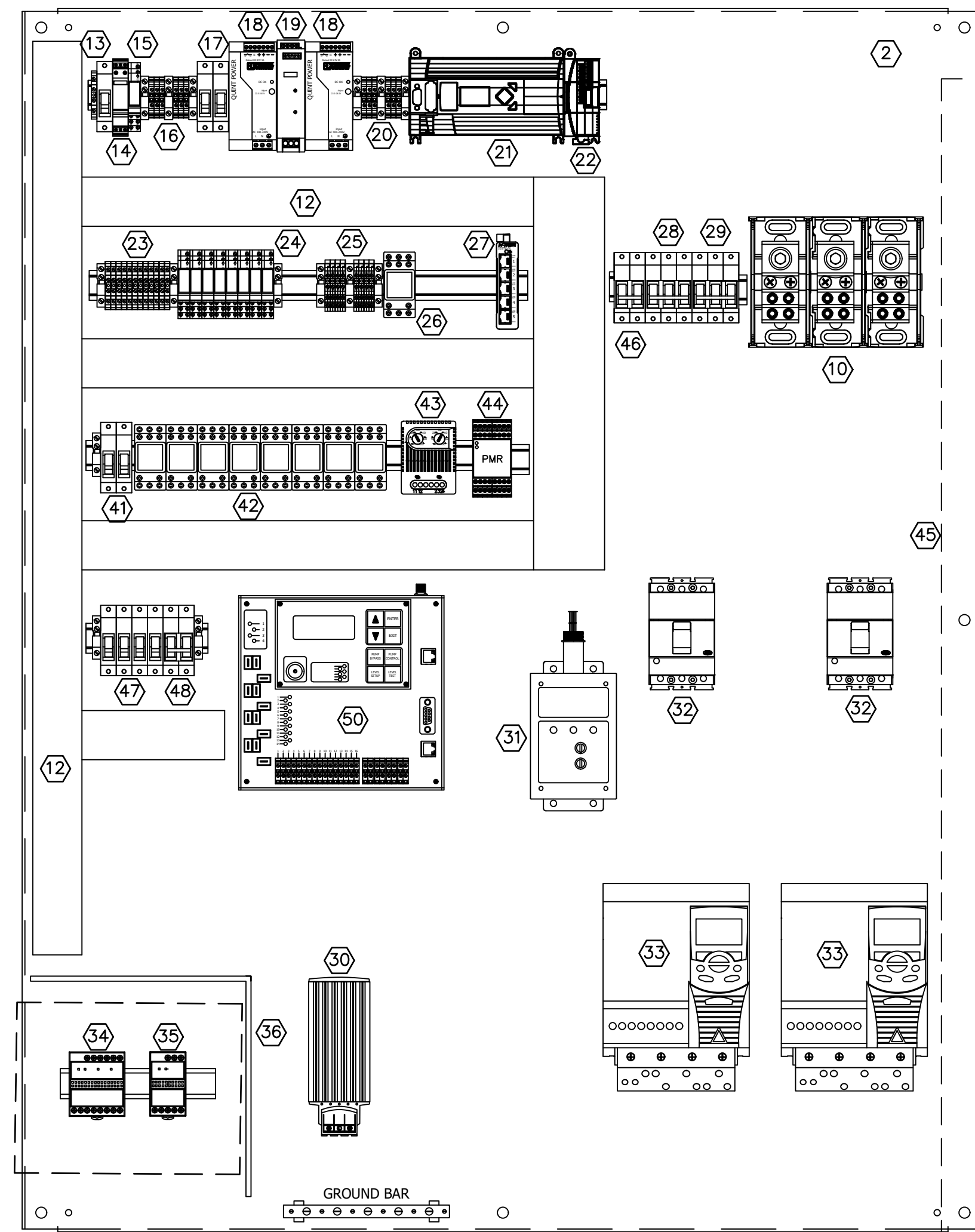
RECOMMENDED FOR APPROVAL	<i>Erick Smith</i>	05/25/2018
DESIGNED:	MWE/JR	DATE
CHECKED:	ES	DATE

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
WEST LIFT STATION SITE PLAN

HORIZONTAL SCALE	1" = 20'
VERTICAL SCALE	N/A
SHEETS	121 of 126
PROJECT	15-3371



NOTE: ALL PILOT DEVICES, HMI AND OTHER TO BE MOUNTED ON INTERIOR SWING PANELS.



ELECTRICAL KEYED NOTES: ⬡

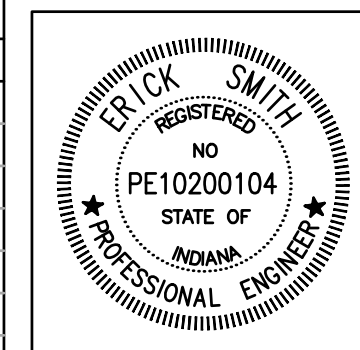
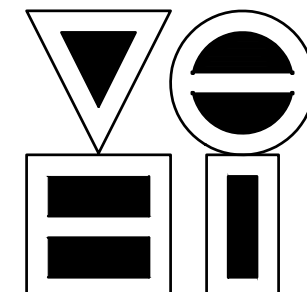
1. NEMA 4X STAINLESS STEEL ENCLOSURE, 60"X48"X16" MINIMUM. WITH 3 POINT LATCH AND LOCKABLE HANDLE.
2. 60"X48" EQUIPMENT PANEL.
3. SWING PANELS, INCLUDE SWING PANEL KIT.
4. ALARM BEACON, STROBE LIGHT.
5. FLYGT MINICAS II FLUSH MOUNT SEAL FAIL RELAY. RELAY SHALL INCLUDE RESET BUTTON, LOCAL SEAL FAIL, OVER TEMP AND POWER INDICATORS.
6. GREEN PUSH-TO-TEST AND AMBER PUSH-TO-TEST PILOT LIGHTS, TYPICAL FOR EACH PUMP. 30.5MM NEMA4X.
7. 3 POSITION HOA SWITCH, TYPICAL FOR EACH PUMP. 30.5MM NEMA4X.
8. PUSHBUTTON FOR ALARM RESET/HORN SILENCE. 30.5MM NEMA4X.
9. NAME PLATES. WHITE WITH BLACK LETTERS.
10. 100A DISTRIBUTION BLOCK.
11. NEMA 4X ALARM HORN.
12. WIRE DUCT - AS NEEDED.
13. 1 POLE 120VAC 20A CONTROL POWER CIRCUIT BREAKER.
14. 120V SURGE PROTECTION - PANEL POWER.
15. 120V PANEL CONTROL POWER FAIL RELAY.
16. 120V HOT/NEUTRAL DISTRIBUTION TERMINAL BLOCKS.
17. 3A 1P 24VDC POWER SUPPLY CIRCUIT BREAKERS.
18. 5A 24VDC REDUNDANT POWER SUPPLIES.
19. POWER SUPPLY REDUNDANCY MODULE.
20. 24VDC +/- DISTRIBUTION TERMINAL BLOCKS.
21. MICROLOGIX 1400 CONTROLLER.
22. MICROLOGIX 1400 ANALOG INPUT MODULE.
23. DIGITAL INPUT FIELD TERMINAL BLOCKS.
24. DIGITAL OUTPUT ISOLATION RELAYS.
25. ANALOG TERMINAL BLOCKS WITH OPTO ISOLATION.
26. UPS BYPASS RELAY.
27. 5 PORT ETHERNET SWITCH.
28. 3P 15A CIRCUIT BREAKER FOR PHASE FAIL RELAY.
29. 3P 30A CIRCUIT BREAKER FOR 3 PHASE SPD.
30. PANEL CONDENSATION HEATER.
31. 3 PHASE SURGE PROTECTION DEVICE (SPD).
32. 20A MOLDED CASE MOTOR PROTECTION CIRCUIT BREAKER
33. ABB ACS355 SERIES 5HP VFD OR APPROVED EQUAL.
34. FLOAT SWITCH INTRINSICALLY SAFETY BARRIER.
35. SUBMERSIBLE LEVEL TRANSMITTER INTRINSICALLY SAFETY BARRIER.
36. INTRINSICALLY SAFE AREA.
37. COOLING FAN SIZED APPROPRIATELY FOR ENCLOSURE SIZE AND HEAT DISSIPATION OF ALL COMPONENTS. NEMA4X RATED EXHAUST AND INTAKE VENTS.
38. 7" TOUCH SCREEN HMI, SIMILAR TO MAPLE SYSTEMS HMI5070P.
39. GFI COURTESY OUTLET.
40. 800VA MINIMUM TRUE ONLINE UPS FOR PLC AND HMI BACKUP.
41. AS REQUIRED 1P CIRCUIT BREAKERS.
42. CONTROL RELAYS.
43. DUAL THERMOSTAT FOR HEAT/COOL.
44. PHASE FAIL MONITOR.
45. 3PHASE UTILITY POWER.
46. 2P TRANSFORMER CIRCUIT BREAKER.
47. 1P SUPPLEMENTAL CIRCUIT BREAKERS: 20A GENERATOR BATTERY CHARGER, 20A FOR REMOTE OMNI SITE PANEL, 20A FOR RECEPTACLE AND 20A FOR SITE LIGHTING.
48. 2P 20A CIRCUIT BREAKER FOR GENERATOR BLOCK HEATER.
49. 2KVA EXTERNAL MOUNT SS TRANSFORMER - 480V/120V.
50. OMNISITE XR50 CELLULAR ALARM SYSTEM.
51. 4DBI CELLULAR ANTENNA.

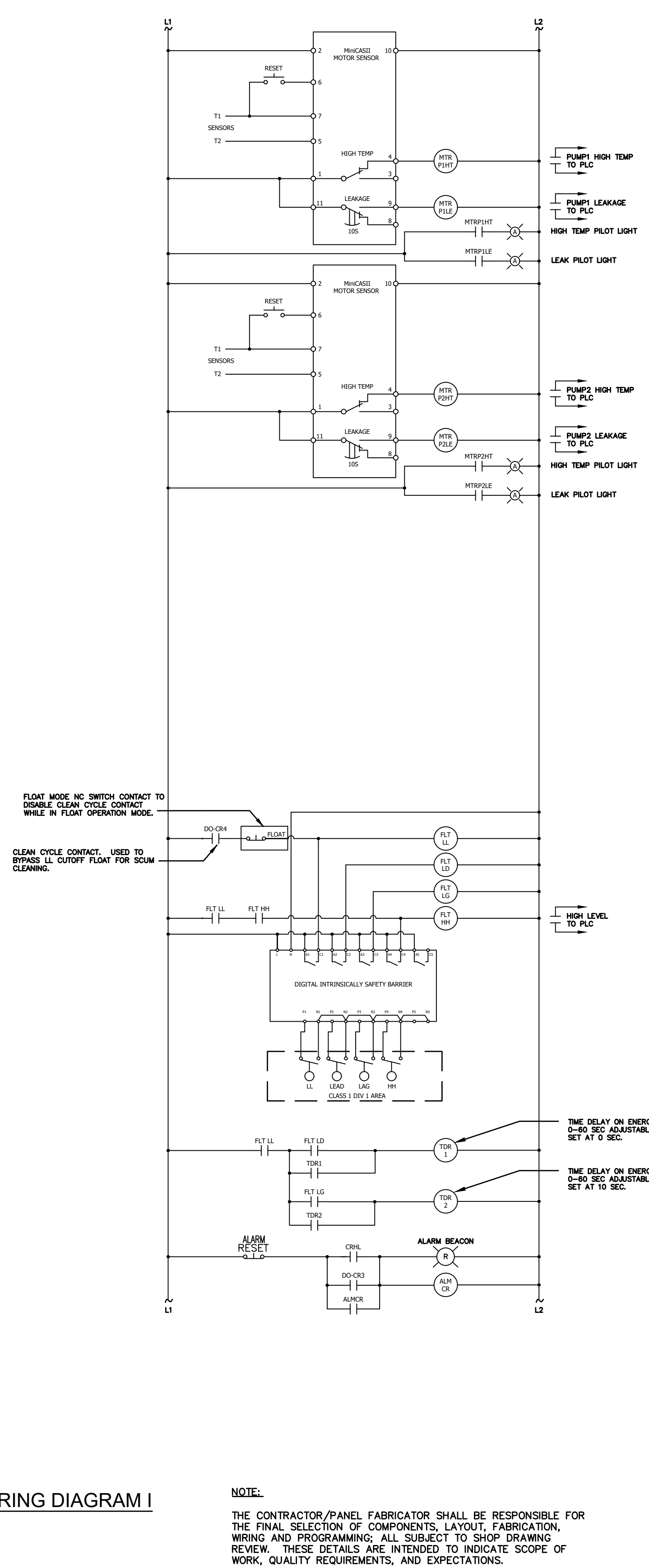
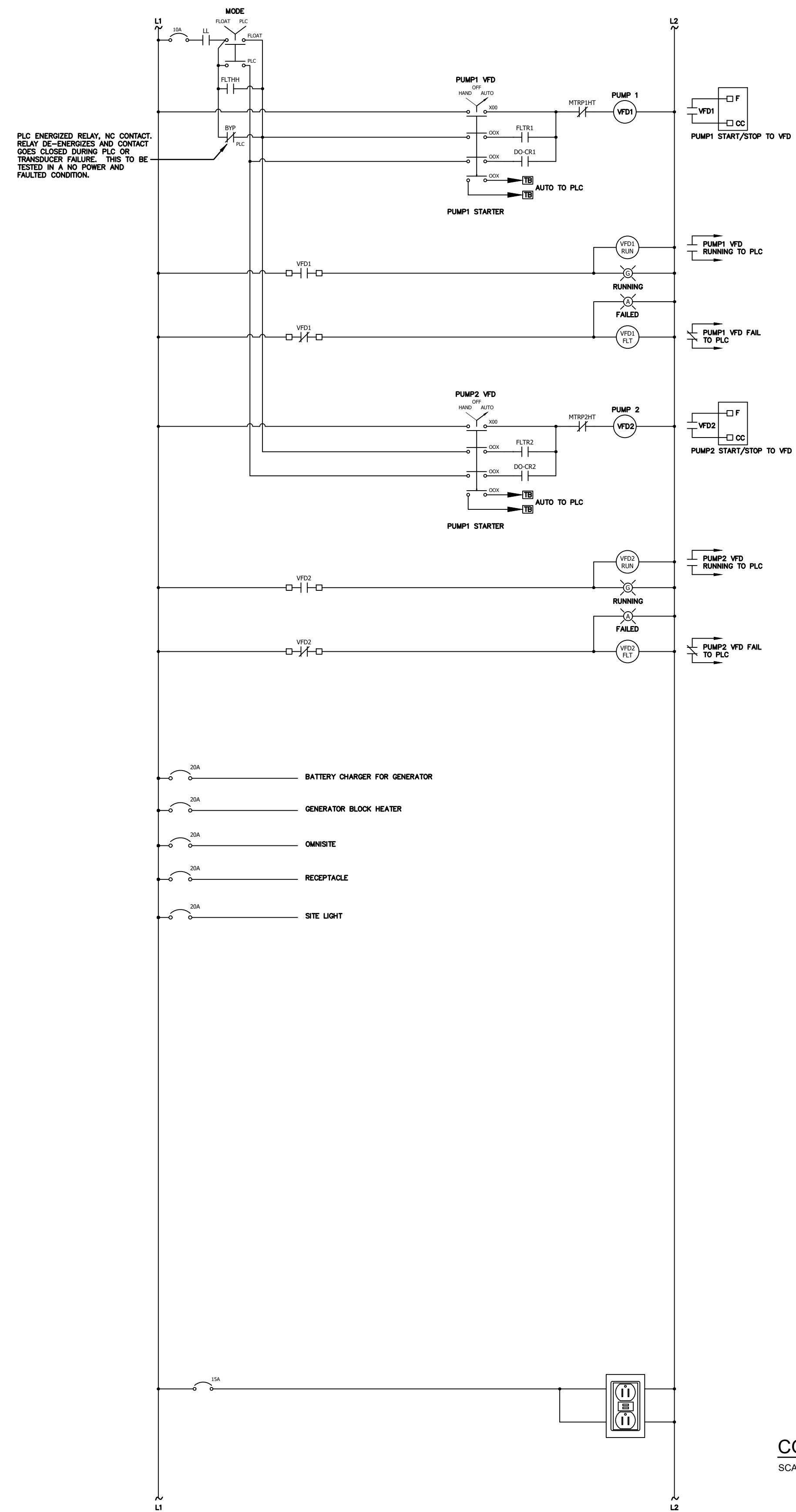
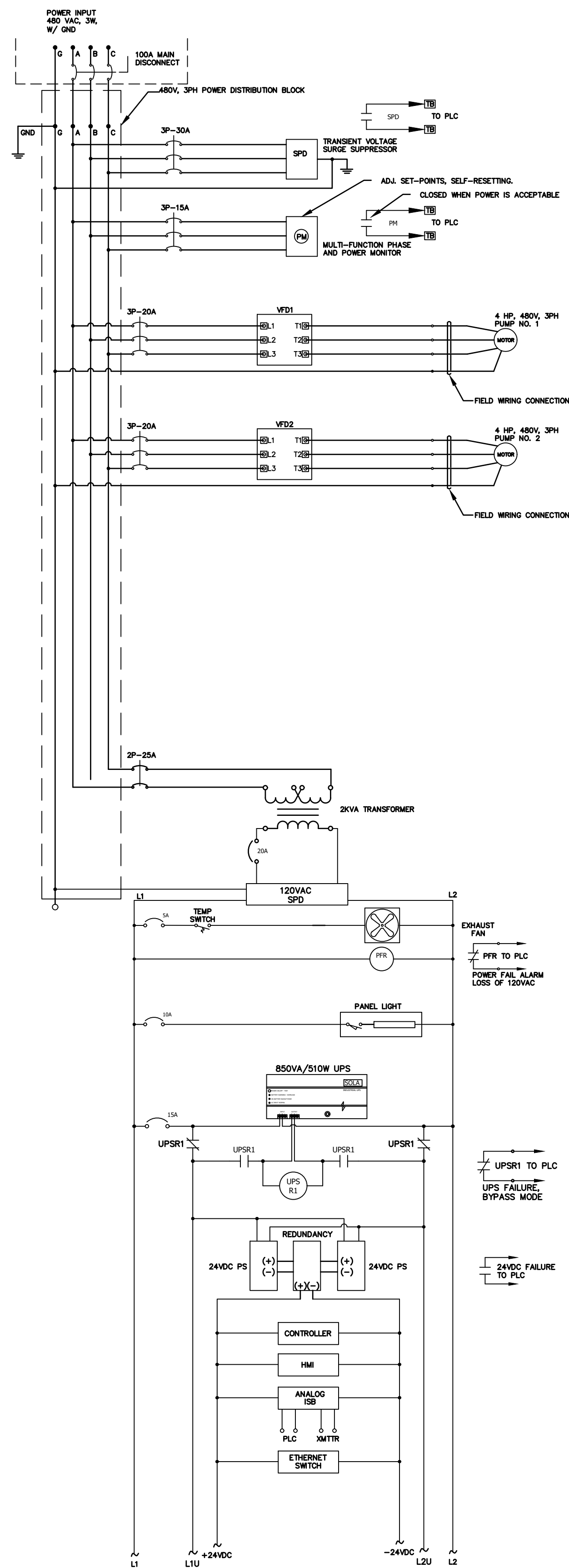
**WEST LIFT STATION CONTROL PANEL LAYOUT
DETAILS**

SCALE: NONE

GENERAL ELECTRICAL NOTE:

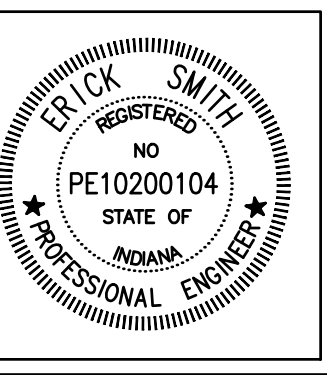
THE CONTRACTOR/PANEL FABRICATOR SHALL BE RESPONSIBLE FOR THE FINAL SELECTION OF COMPONENTS, LAYOUT, FABRICATION, WIRING AND PROGRAMMING; ALL SUBJECT TO SHOP DRAWING REVIEW. THESE DETAILS ARE INTENDED TO INDICATE SCOPE OF WORK, QUALITY REQUIREMENTS, AND EXPECTATIONS.





CONTROL PANEL WIRING DIAGRAM I
SCALE: NONE

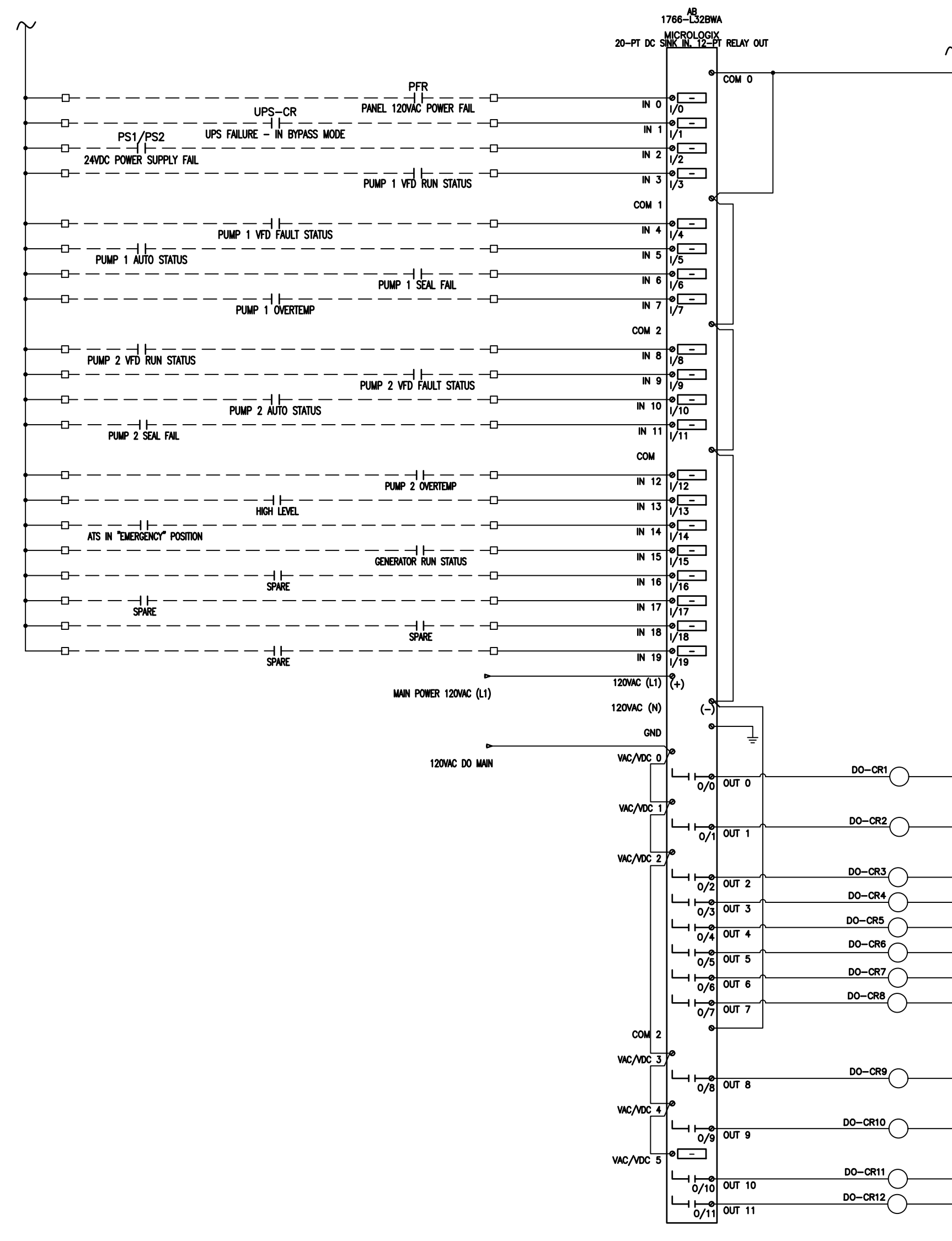
NOTE:
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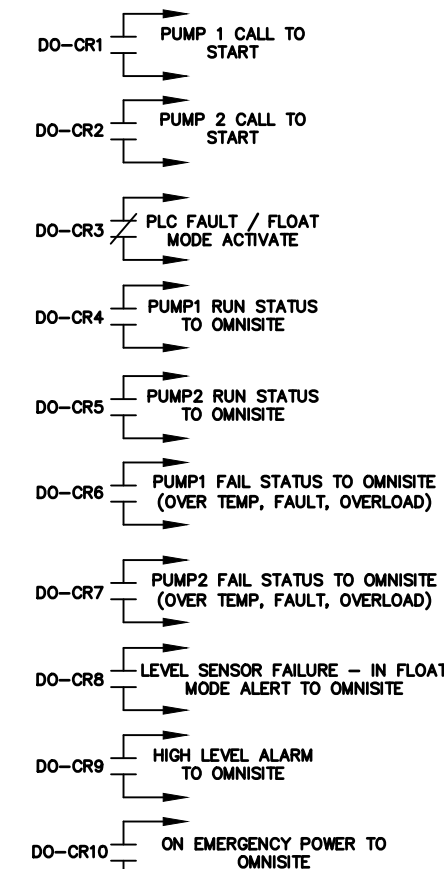
RECOMMENDED FOR APPROVAL	<i>M.W.E./J.R.</i>	05/25/2018
DESIGNED:	MWE/JR	DRAWN:
CHECKED:	ES	CHECKED:

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM
WEST LIFT STATION
PUMP CONTROL PANEL WIRING

HORIZONTAL SCALE	N/A
VERTICAL SCALE	N/A
SHEETS	123 of 126
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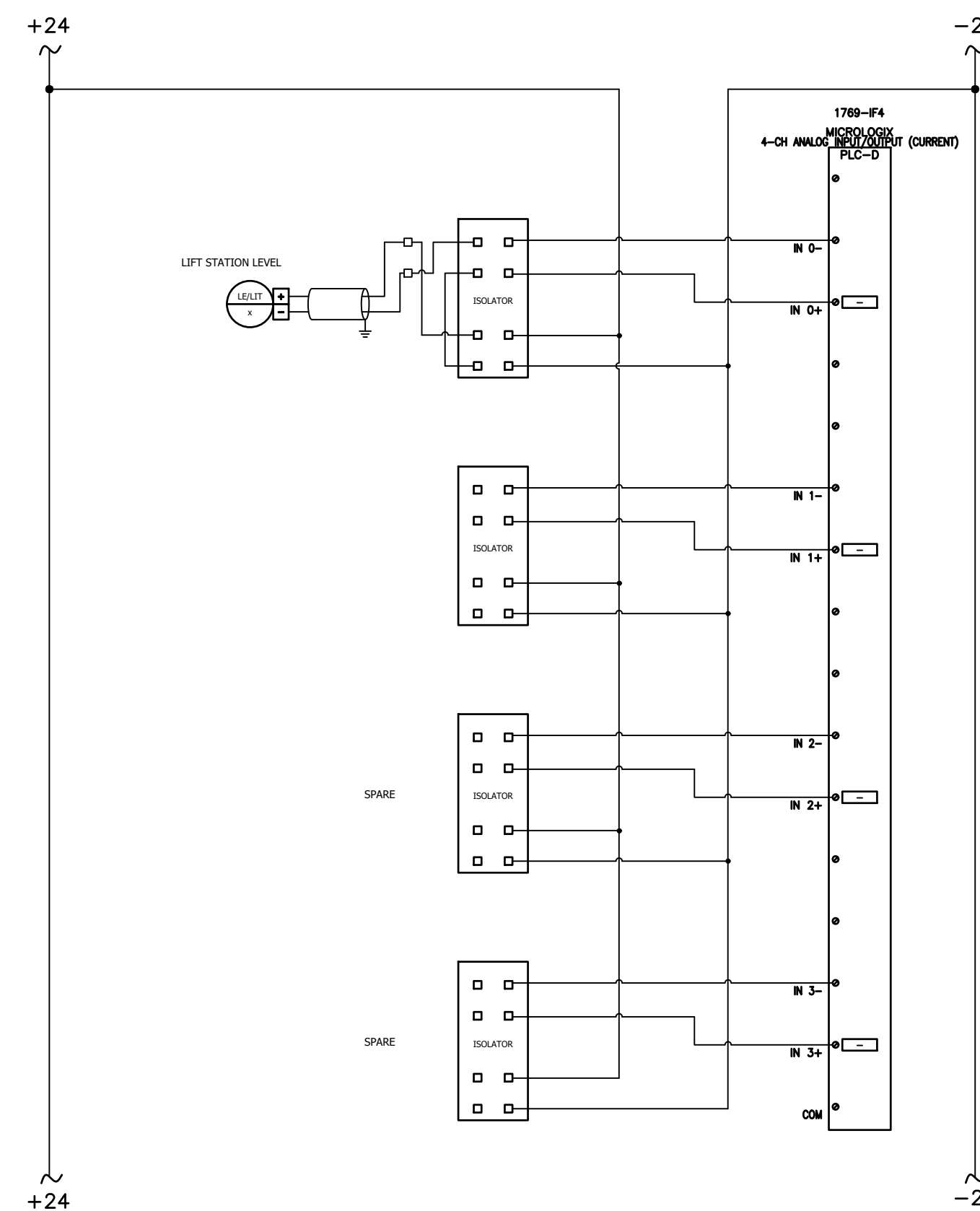


DIGITAL INPUT/OUTPUT BASE WIRING



CONTROL PANEL WIRING DIAGRAM

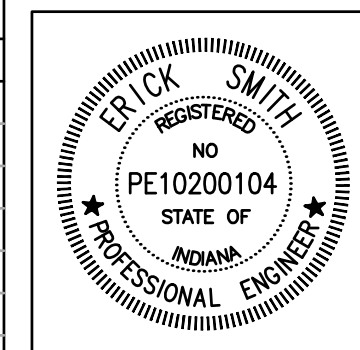
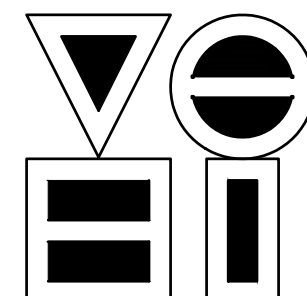
SCALE: NONE

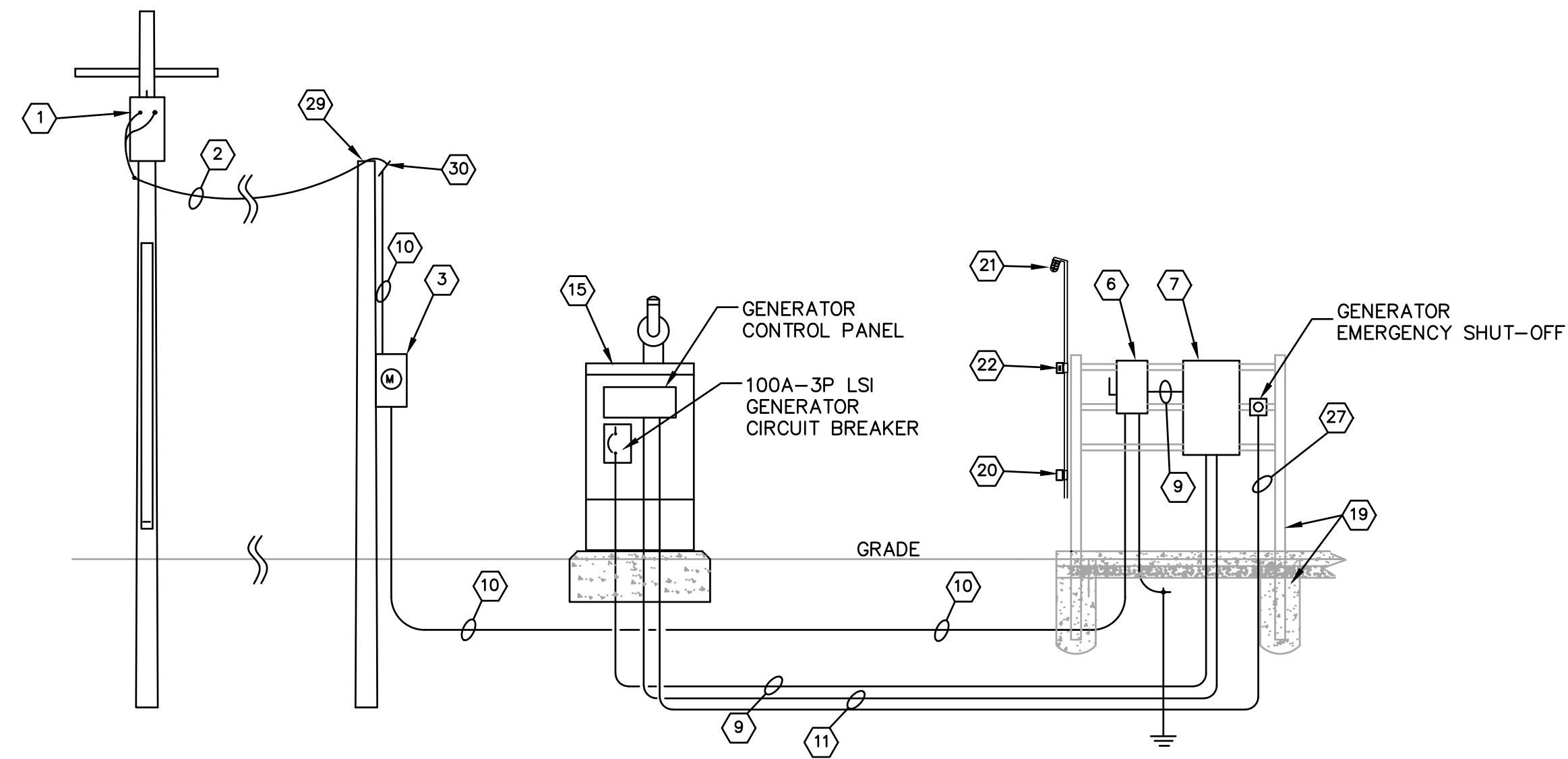


ANALOG INPUT MODULE 1 WIRING DETAIL

NOTE:

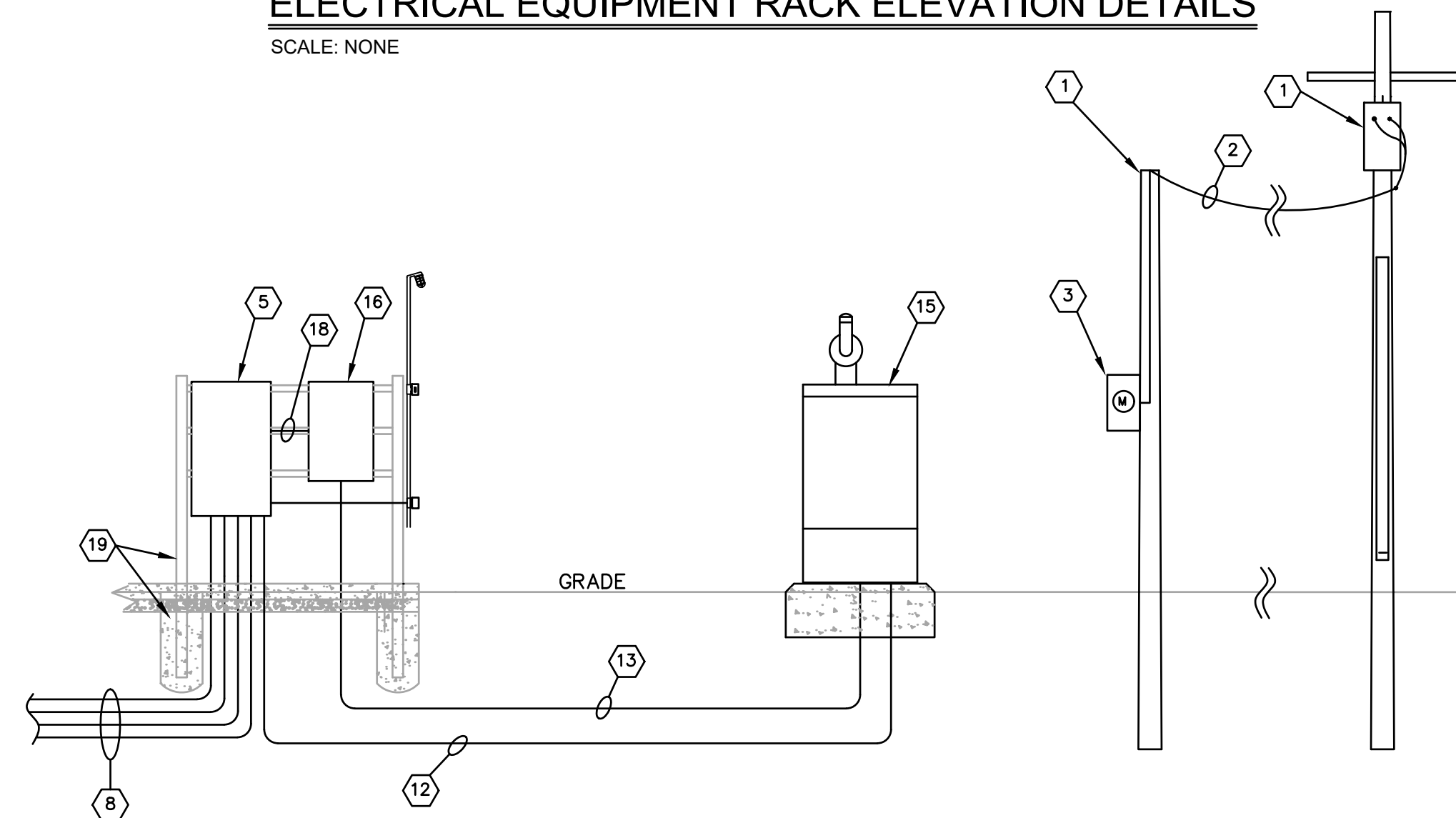
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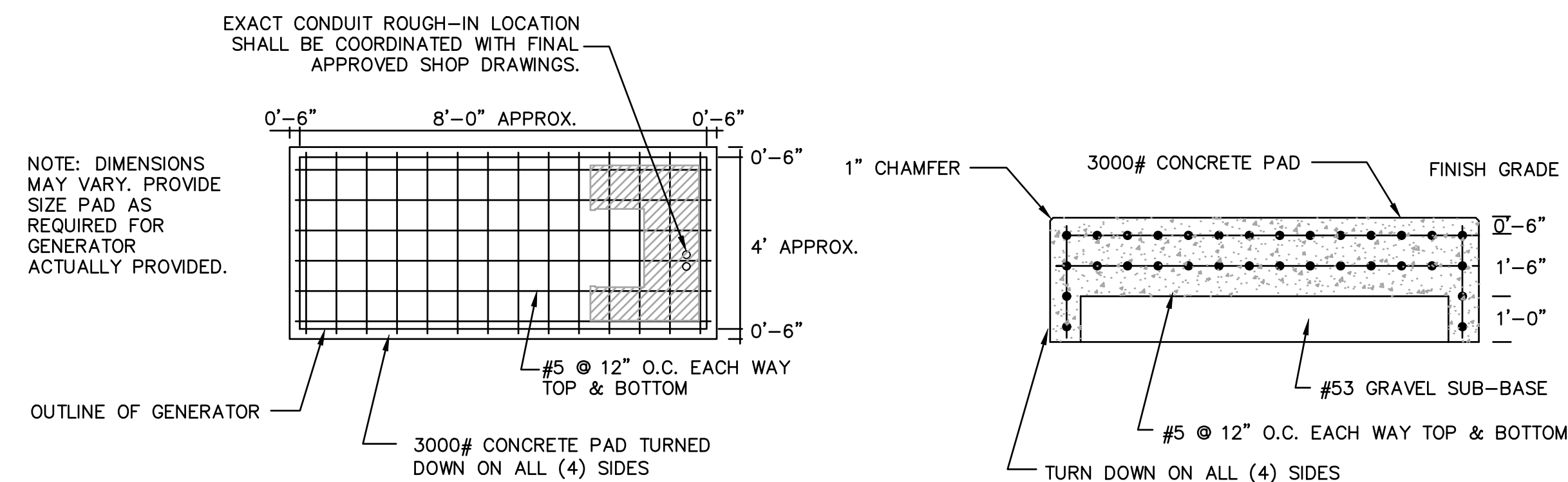
ELECTRICAL EQUIPMENT RACK ELEVATION DETAILS

SCALE: NONE



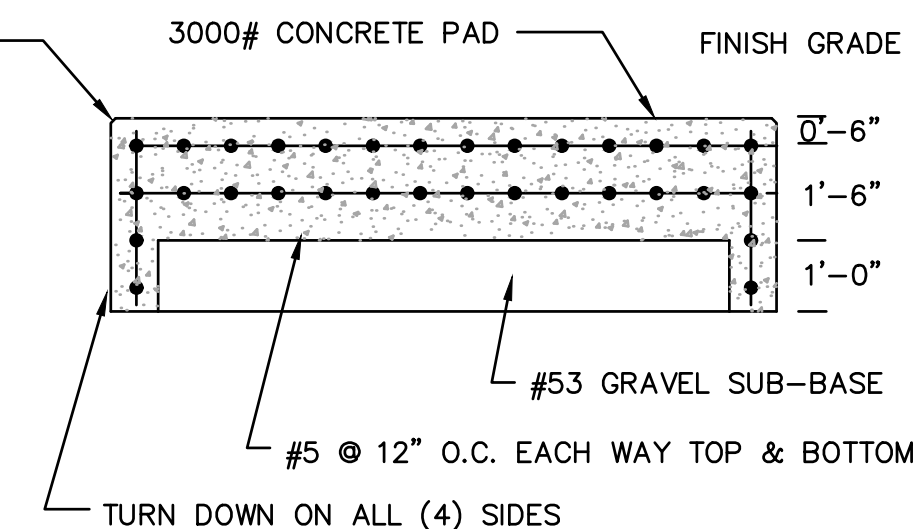
ELECTRICAL EQUIPMENT RACK ELEVATION DETAILS

SCALE: NONE



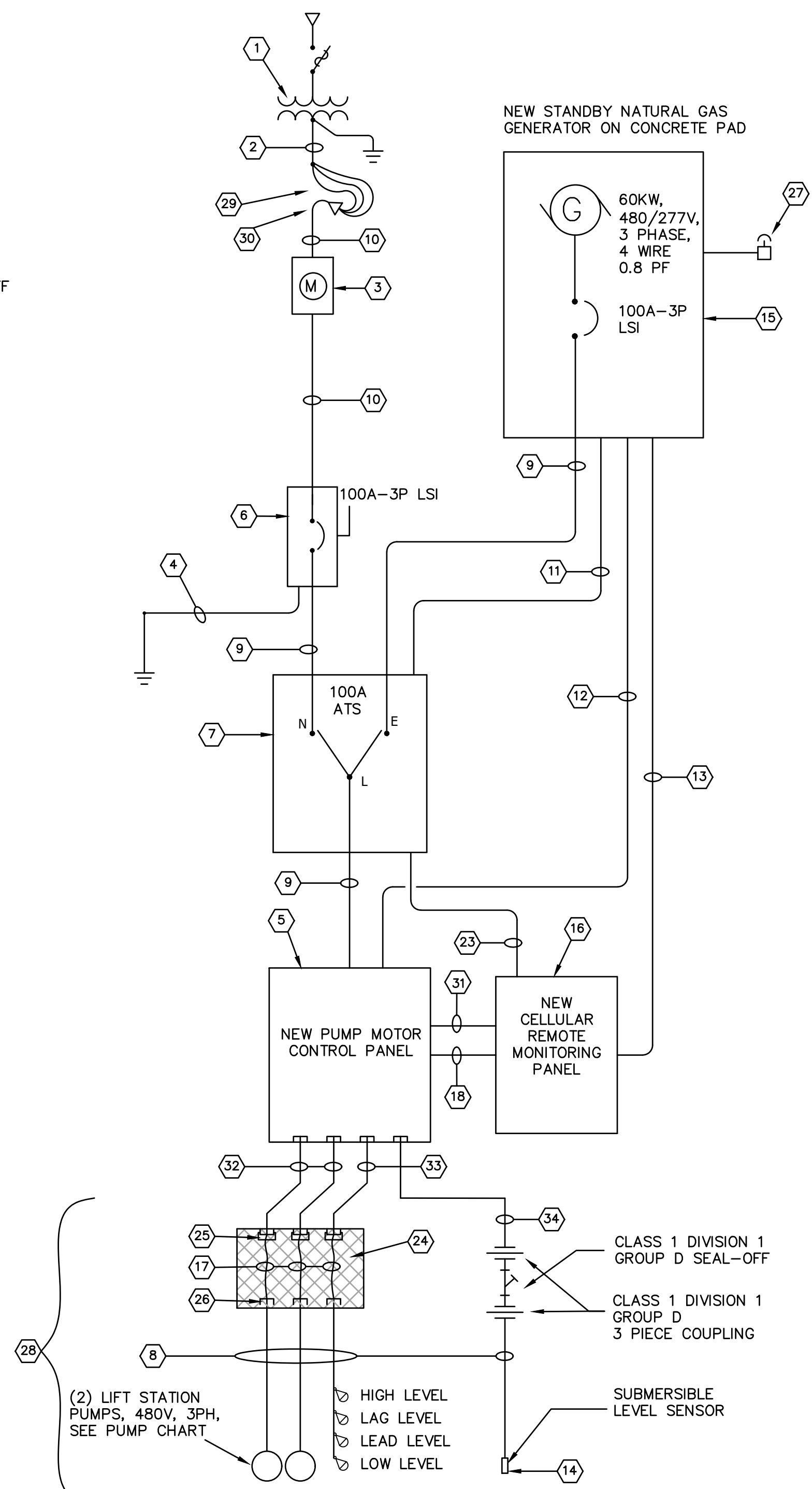
GENERATOR PAD DETAIL

SCALE: NONE



GENERATOR PAD SECTION VIEW

SCALE: NONE



ONE-LINE DIAGRAM FOR EAST AND WEST LIFT STATIONS.

SCALE: NONE (TOTAL OF (2) LIFT STATIONS)

PUMP CHART			
DESCRIPTION	EAST	WEST	COMMENTS
PUMP P1	34HP	4HP	SERVICE SIZE AND MOTOR FEEDERS ARE IDENTICAL FOR BOTH LOCATIONS.
PUMP P2	34HP	4HP	SERVICE SIZE AND MOTOR FEEDERS ARE IDENTICAL FOR BOTH LOCATIONS.

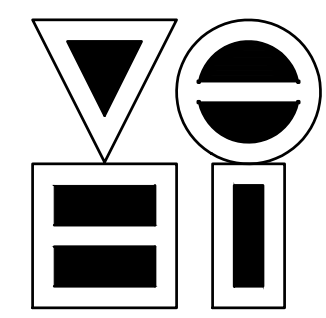
GENERAL ELECTRICAL NOTES:

- PROVIDE RIGID ALUMINUM FOR ALL CONDUITS INSTALLED ABOVE GRADE. PROVIDE SCH 80 PVC FOR ALL CONDUITS INSTALLED BELOW GRADE WITH PVC COATED, RIGID ELBOWS WHEN TURNING UP FROM BELOW GRADE. FOR CONDUITS FROM THE WET WELL AND VENTED TERMINAL BOX, THESE SHALL BE PVC COATED, RIGID STEEL CONDUIT.
- PROVIDE LINK SEAL WITH STAINLESS HARDWARE FOR ALL CONDUIT PENETRATIONS INTO LIFT STATION WET WELL.
- 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.
- ALL ELECTRICAL EQUIPMENT, DEVICES, CONDUIT, WIRING, MOUNTING HARDWARE, ETC. SHALL BE FURNISHED AND INSTALLED BY EC UNLESS OTHERWISE NOTED.
- WET WELL CLASSIFICATION IS CLASS 1 DIVISION 1 GROUP D; ALL WIRING METHODS SHALL COMPLY.
- WITHIN A 5' RADIUS OF ANY VENTED OPENING ATTACHED TO THE WET WELL SHALL BE CLASS 1 DIVISION 1 GROUP D RATED.
- IDENTIFY HIGH LEG CONDUCTOR IN ALL PANELS, CABINETS, AND BOXES.

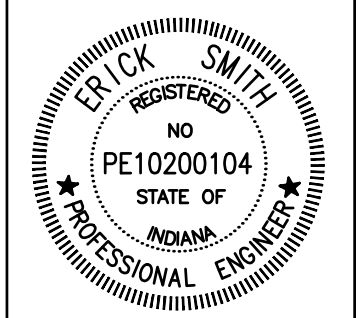
ELECTRICAL KEYED NOTES:

- NEW UTILITY CO. POWER POLE AND TRANSFORMER BANK BY UTILITY.
- NEW SERVICE LATERAL CONDUCTORS BY CONTRACTOR; 4-#1, 1-1/2" C. FURNISH AND INSTALL RISER UP POLE (SCHEDULE 80PVC) WITH WEATHERHEAD.
- NEW UTILITY METER. METER BASE FURNISHED AND INSTALLED BY CONTRACTOR. COORDINATE WITH UTILITY FOR BASE REQUIREMENTS. METER INSTALLED BY UTILITY.
- #4 THWN COPPER GROUND ELECTRODE CONDUCTOR, SLEEVE IN 3/4" CONDUIT, BOND TO 3/4" x 8' COPPER-CLAD GROUND ROD. INSTALL GROUND ROD IN UNDISTURBED COHESIVE SOIL.
- NEW PUMP MOTOR CONTROL PANEL, NEMA 4X, STAINLESS STEEL ENCLOSURE, SEE DETAIL SHEET.
- NEW 100A, ENCLOSED CIRCUIT BREAKER, 277/480V, 3PH, 4W NEMA 4X LOCKABLE STAINLESS STEEL ENCLOSURE; SERVICE ENTRANCE RATED, UL LISTED, 65 KAIC. LSI.
- NEW 100A, AUTOMATIC TRANSFER SWITCH, 277/480V, 3PH, 4W NEMA 4X STAINLESS STEEL ENCLOSURE, OPEN TRANSITION SOLID NEUTRAL. ASCO 300 OR APPROVED EQUAL. SEE SPECIFICATIONS.
- 4 NEW CONDUITS AND CABLES TO WET WELL:
 (1) 1-1/2" C. WITH PUMP #1 POWER/SENSOR CABLE, FURNISHED WITH PUMP, INSTALLED BY CONTRACTOR.
 (1) 1-1/2" C. WITH PUMP #2 POWER/SENSOR CABLE, FURNISHED WITH PUMP, INSTALLED BY CONTRACTOR.
 (1) 1-1/2" C. WITH 4 FLOAT SWITCH CABLES, FURNISHED WITH FLOATS, INSTALLED BY CONTRACTOR.
 (1) 1-1/2" C. WITH SUBMERSIBLE LEVEL SENSOR CABLE, FURNISHED WITH SENSOR, INSTALLED BY CONTRACTOR.
- 4-#1 CU, 1-#8 CU GND, 1-1/2" C.
- 4-#1 CU, 1 1/2" C.
- 2-#14 CU GENERATOR INITIATE, 1-#14 CU GND, 3/4" C.
- NEW BATTERY CHARGER, PROVIDE 120V, 20A-1P CIRCUIT BREAKER, 2-#12 CU, 1-#12 CU GND; NEW BLOCK HEATER, PROVIDE 120V, 20A-1P CIRCUIT BREAKER, 2-#12 CU, 1-#12 CU GND, ALL IN 1" C. CONFIRM REQUIREMENTS FOR BLOCK HEATER CIRCUIT WITH FINAL APPROVED GENERATOR SHOP DRAWINGS.
- GENERATOR RUN STATUS, 2-#14 CU; GENERATOR FAIL STATUS, 2-#14 CU; WEAK BATTERY, 2-#14 CU; 1-#14 CU SHARED GND, ALL IN 3/4" C.
- SUBMERSIBLE LEVEL SENSOR; SEE DETAIL SHEET.
- NEW 60KW STANDBY DIESEL GAS GENERATOR, 277/480V, 3PH, 4W, 0.8PF. GENERAC #50060, FURNISHED AND INSTALLED BY CONTRACTOR. CONCRETE PAD FURNISHED AND INSTALLED BY CONTRACTOR. SEE SPECIFICATIONS. INCLUDES OUTDOOR ENCLOSURE.
- NEW CELLULOR REMOTE MONITORING PANEL, OMNI-SITE OR EQUAL.
- SPLICE POINT; SEE VENTED WIRE BOX DETAIL.
- PUMP #1 RUN STATUS, 2-#14 CU, (QUERY ONLY), PUMP #1 FAIL STATUS, 4-#14 CU, (OVER TEMPERATURE, MOTOR OVERLOAD FAILURE), PUMP #1 WARNING STATUS, 2-#14 CU, (LEAK SEAL) PUMP #2 RUN STATUS, 2-#14 CU, (QUERY ONLY), PUMP #2 FAIL STATUS, 4-#14 CU, (OVER TEMPERATURE, MOTOR OVERLOAD FAILURE), PUMP #2 WARNING STATUS, 2-#14 CU, (LEAK SEAL), HIGH LEVEL ALARM, 2-#14 CU, POWER STATUS, 2-#14 CU, CONTROLLER/LEVEL SENSOR FAILURE, TSP #16 (BELDEN #B719) 1-#14 CU SHARED GND, ALL IN 1" C.
- WELDED HEAVY DUTY STAINLESS STEEL SUPPORT FRAME, USING 4" X 4" SQUARE VERTICAL POSTS, AND 2" X 1/2" STAINLESS STEEL UNISTRUT CROSS BARS. SET POSTS 36" DEEP IN 16" DIAMETER, 3000 PSI CONCRETE, WITH ASPHALT ROOF CEMENT CORROSION PROTECTION ON VERTICAL POSTS BELOW GRADE.
- NEW WP/GFI 20A RECEPTACLE, 2-#12 CU, 1-#12 CU GND.
- STANCHION MOUNTED, ENCLOSED AND GASKETED FIXTURE, GUARD, 120V, 26W LED, RAB LTG #VXBRLD26DG OR EQUAL.
- NEW WEATHERPROOF LIGHT SWITCH IN NEMA 4X ENCLOSURE.
- ATS IN "EMERGENCY" POSITION, 2-#14 CU, 1-#14 CU GND, 3/4" C.
- NEW VENTED WIRE BOX, SEE DETAIL.
- CLASS 1 DIVISION 1 GROUP D SEALOFF; SEE DETAIL
- PROVIDE TERMINATION BUSHINGS ON CONDUITS STUBBED INTO VENTILATED WIREWAY AREA FROM BELOW; TYPICAL.
- 2-#14 CU, 1-#14 GND, 3/4" C. FOR GENERATOR EMERGENCY SHUT-OFF DEVICE MUST BE MOUNTED REMOTE ON RACK.
- ALL CONDUITS SHALL BE PVC COATED RIGID STEEL.
- NEW UTILITY POLE; FURNISHED AND INSTALLED BY UTILITY CO.
- NEW WEATHERHEAD (OZ GEDNEY #CT-150G) AND SPLICES (POLARIS STYLE BLOCKS WITH RUBBER TAPE AND SCOTCH #33 WRAPPED).
- 120V POWER, 2-#12, 1-#12 GND, 3/4" C
- 3-#10, 1-#10 GND, 3/4" C
- 8-#14, 1-#14 GND, 3/4" C
- LEVEL SENSOR CABLE, 3/4" C

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 1545 COUNTRY CLUB ROAD INDIANAPOLIS, INDIANA 46234
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RECOMMENDED FOR APPROVAL: *Michael J. Smith* DESIGN ENGINEER 05/25/2018 DATE

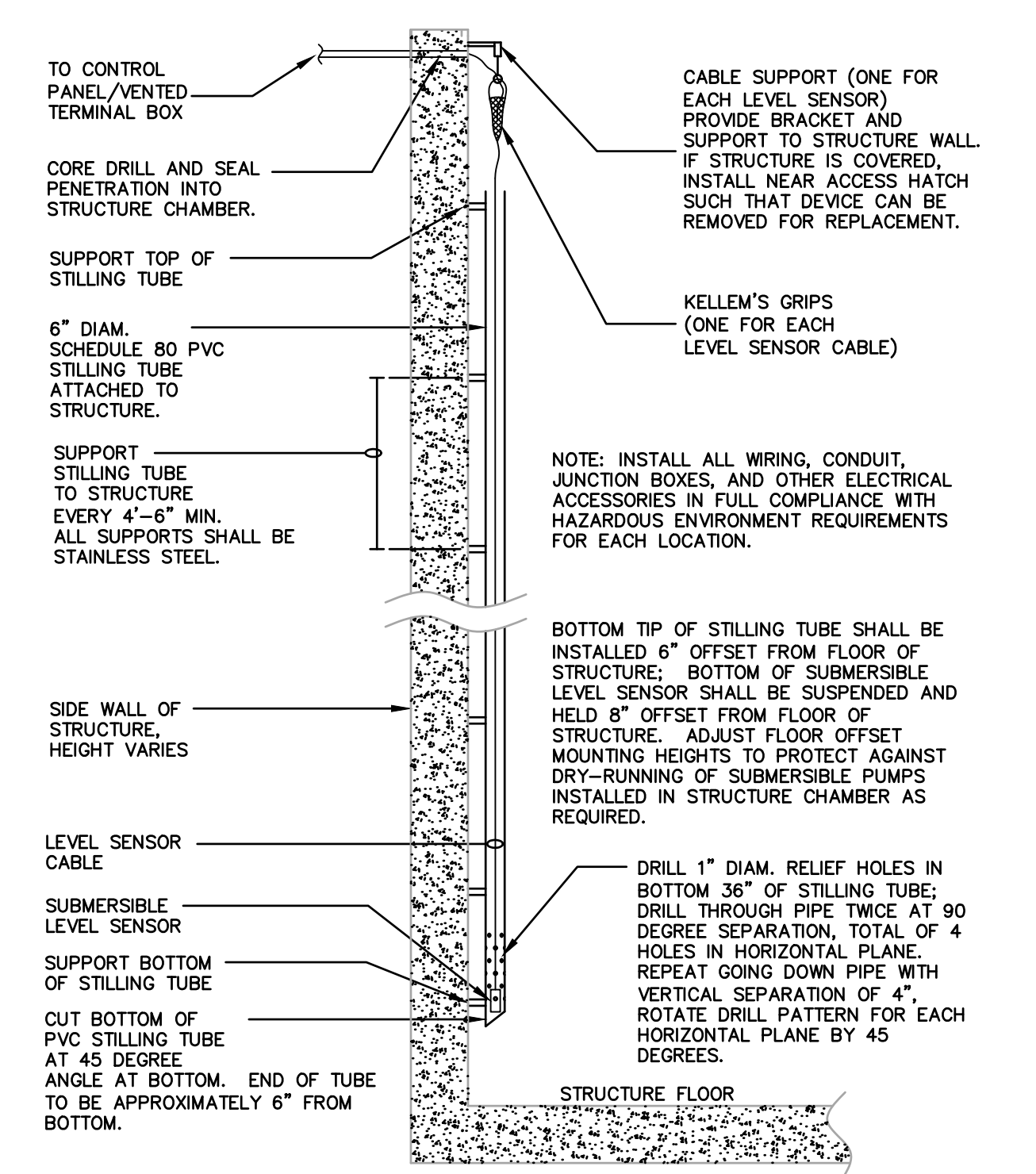
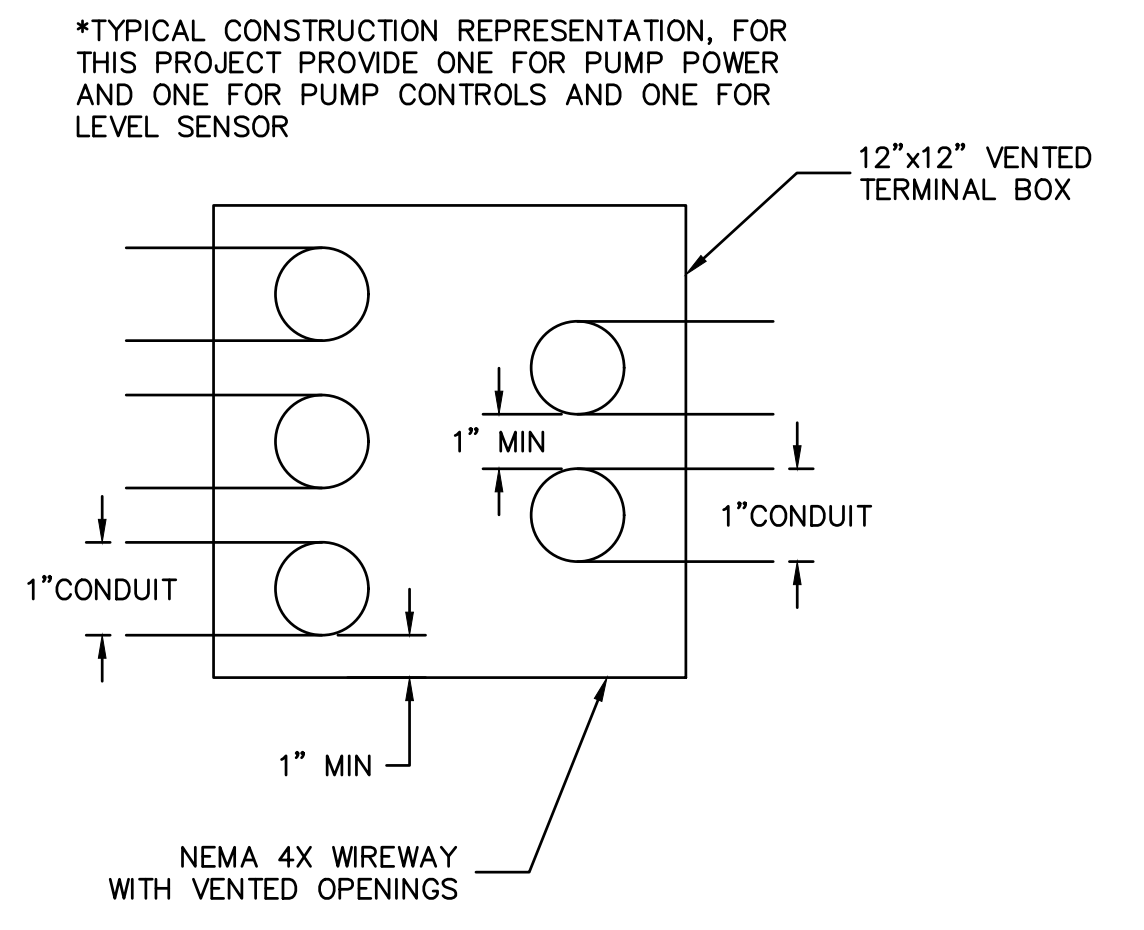
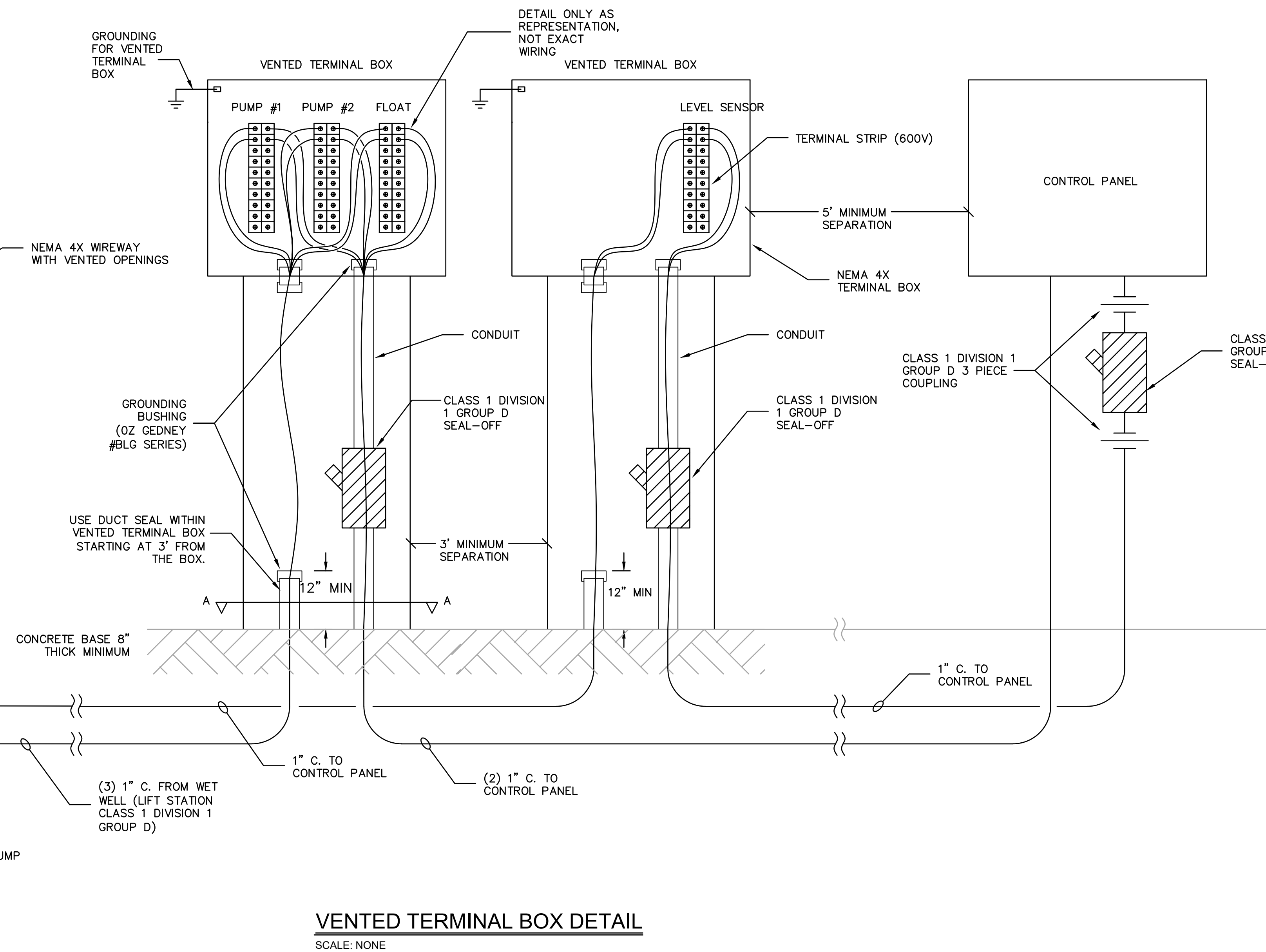
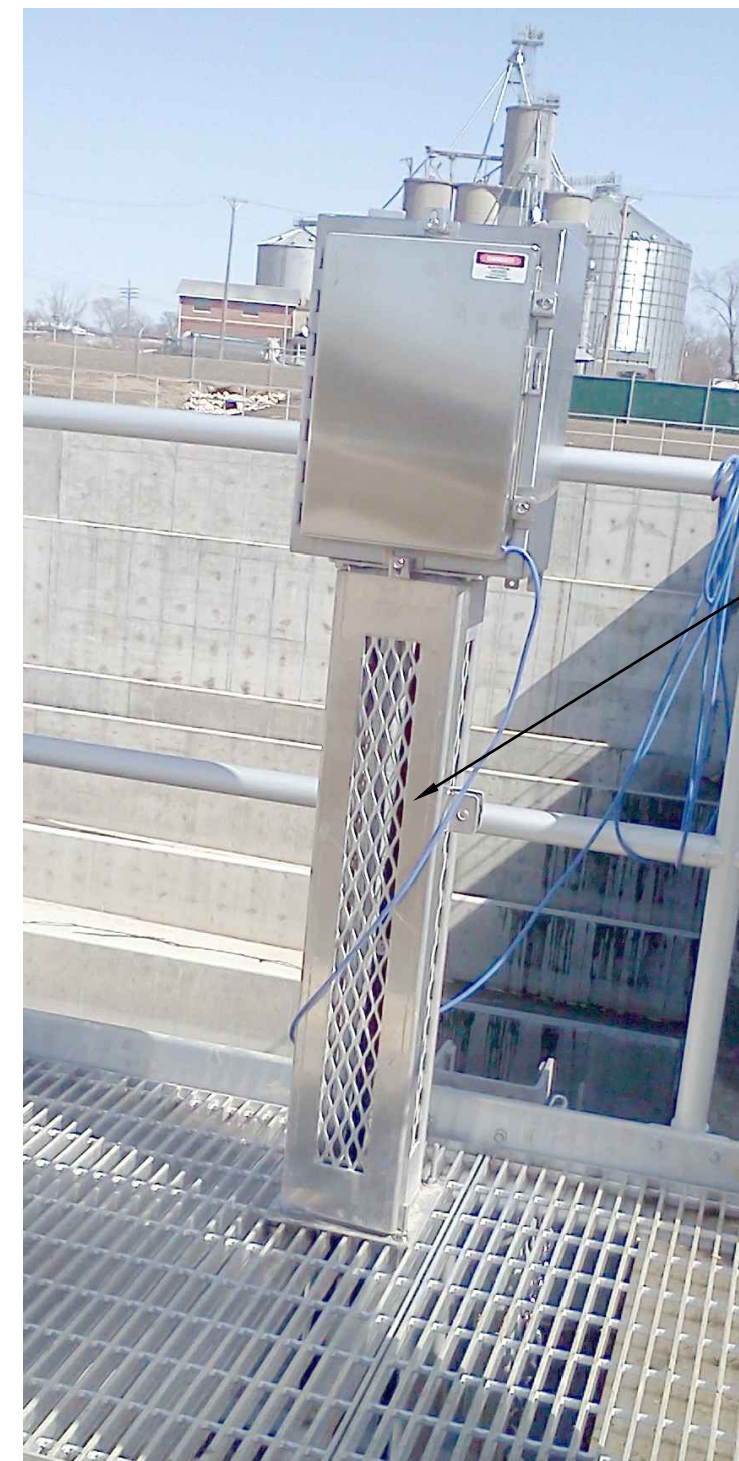
DESIGNED: MWE/JR DRAWN: MWE/JR

CHECKED: ES CHECKED: ES

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

EAST & WEST LIFT STATION SINGLE LINE DIAGRAM

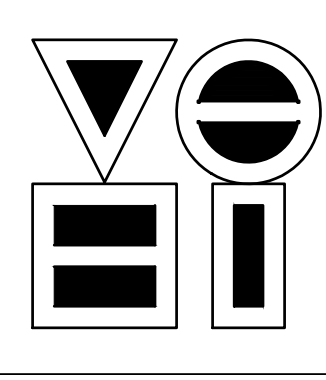
HORIZONTAL SCALE	
N/A	
VERTICAL SCALE	
N/A	
SHEETS	
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PROJECT	
15-3371	



VENTED TERMINAL BOX DETAIL
SCALE: NONE

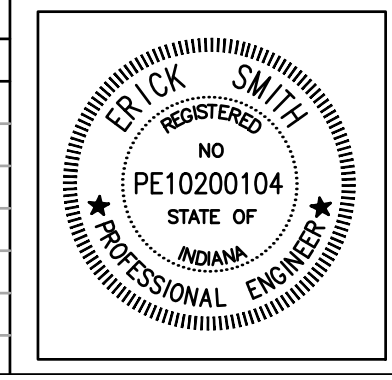
SUBMERSIBLE LEVEL SENSOR - STILLING TUBE DETAIL, TYPICAL
SCALE: NONE

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REVISIONS			
NO.	DATE	DESCRIPTION	BY



RECOMMENDED FOR APPROVAL: *Erick Smith* 05/25/2018
DESIGN ENGINEER DATE

DESIGNED: MWE/JR DRAWN: MWE/JR
CHECKED: ES CHECKED: ES

S.R. 32/NUCOR RD. AREA SANITARY SEWER COLLECTION SYSTEM

EAST & WEST LIFT STATION ELECTRICAL DETAILS

HORIZONTAL SCALE	
VERTICAL SCALE	N/A
SHEETS	126 of 126
PROJECT	15-3371