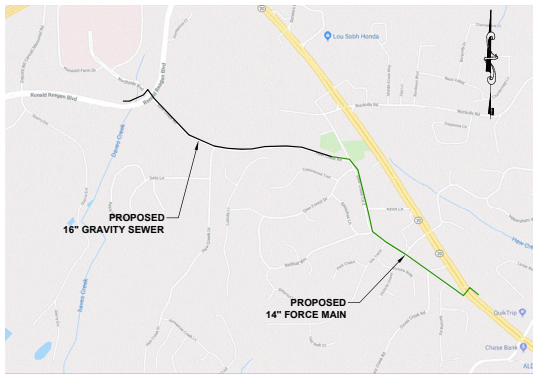


HAW CREEK ROAD OUTFALL SEWER AND FORCE MAIN SITE DEVELOPMENT PLANS CITY OF CUMMING, FORSYTH COUNTY, GA



LOCATION MAP
SCALE: N.T.S.

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16	Plan & Profile - (13)	34	Cheatham Creek LPS
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		36	Low Pressure Sewer Details

CONSTRUCTION ACTIVITY	CONSTRUCTION SCHEDULE									
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES										
INSTALLATION OF SITE IMPROVEMENTS										
MAINTAIN EROSION AND SEDIMENT CONTROL MEASURES FOR ENTIRE PROJECT										
FINAL GRASSING										



BID READY: 10/16/19

- OWNER / PRIMARY PERMITTEE: CITY OF CUMMING
100 MAIN STREET
CUMMING, GEORGIA 30040
PHONE: (770) 781-2020
- ENGINEER: CIVIL ENGINEERING CONSULTANTS, INC.
110 SAMARITAN DRIVE, SUITE 201
CUMMING, GEORGIA 30040
PHONE: (770) 977-5747
- SURVEYOR: TERRAMARK LAND SURVEYING, INC.
1396 BELLS FERRY ROAD
MARIETTA, GA 30066
PHONE: 770-421-1927
ORIGIN OF SURVEY: FIELD RUN TOPOGRAPHY - 02/01/2018
- DISTURBED AREA:
LINEAR DISTURBED AREA
FORCE MAIN/GRAVITY SEWER: 3.60 AC.
PUMP STATION DISTURBED AREA: 0.0 AC.
TOTAL DISTURBED AREA: 3.60 AC.
- APPROXIMATELY 260 FEET OF GRAVITY SEWER WILL BE IN FLOOD ZONE AE PER FEMA FLOOD INSURANCE RATE MAP PANEL 13117C0142F, 13117C0161G, DATED MARCH 4, 2013.
- ZONING DISTRICTS: CBD, R2R, R1, CUMMING, A1
- LAND LOTS: 365, 366, 355, 354, 295, 296, 297, 298
- PROJECT DESCRIPTION:
THE PROJECT WILL INVOLVE CONSTRUCTION OF APPROXIMATELY 3,151 LF OF 16-INCH DIP GRAVITY SEWER AND 4,735 LF (321 LF +/- TO BE WITHIN RW OF SR 20) OF 14-INCH FORCE MAIN. THE PROJECT WILL BEGIN AT 34°09'53"N 84°07'13.5"W, AND END AT 34°10'25.9"N 84°08'21.2"W.



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* 24-HOUR CONTACT: JON HEARD (770) 781-2020

EROSION CONTROL NOTES:

- THE PROJECT RECEIVING WATERS ARE ADJACENT AREAS CONSIST OF RESIDENTIAL AND WOODED AREAS.
- NO LAKE IS WITHIN 500' OF THIS PROJECT.
- THIS SITE DOES NOT CONTAIN WETLANDS.
- WASTE MATERIALS SHALL NOT BE DISCHARGED TO WATERS OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT.
- EROSION CONTROL, ANY BUFFER DELINEATIONS AND TREE PROTECTION MEASURES SHALL BE INSTALLED THREE TO ANY OTHER CONSTRUCTION ACTIVITY AND MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
- THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, AND/OR CONCURRENT WITH ALL LAND DISTURBING ACTIVITIES.
- EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL AND/OR TREAT THE SEDIMENT SOURCE.
- ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 7 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.
- NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50-FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.

CERTIFICATION:

- I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY DIRECT SUPERVISION.
- I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION AND POLLUTION CONTROL (E&SCP) PLAN PROVIDES FOR AN APPROPRIATE AND COMPREHENSIVE SYSTEM OF BEST MANAGEMENT PRACTICES REQUIRED BY THE GEORGIA WATER QUALITY CONTROL ACT AND THE DOCUMENT MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA, (MANUAL) PUBLISHED BY THE STATE SOIL AND WATER CONSERVATION COMMISSION AS OF JANUARY 1 OF THE YEAR IN WHICH THE LAND-DISTURBING ACTIVITY WAS PERMITTED. PROVISIONS FOR THE SAMPLING OF THE RECEIVING WATER(S) OR THE SAMPLING OF THE STORM WATER OUTFALLS AND THAT THE DESIGNED SYSTEM OF BEST MANAGEMENT PRACTICES MEETS THE DESIGN REQUIREMENTS CONTAINED IN THE GENERAL NPDES PERMIT NO. GAR 100002.

GENERAL NOTES:

- EXISTING SITE CONDITIONS: THE PROPOSED SITE IS LOCATED IN CITY OF CUMMING. THE EXISTING SITE IS ADJACENT TO THE PUBLIC RIGHT-OF-WAY AND OTHER AREAS CONSIST OF WOODED LAND, PRIMARILY UNDEVELOPED WITH SOME AREAS RESIDENTIAL AREAS. THE EXISTING PROJECT SITE CONSISTS OF GRADES FROM 0.00% TO 10%. SURROUNDING AREAS ARE UNDISTURBED WITH FEW EXCEPTIONS AND SURFACE RUNOFF IS MINIMAL.
- PROPOSED CONDITIONS: PROJECT AREA IS MORE THAN ONE (1) ACRE OF DISTURBANCE. ALL DISTURBED AREAS WILL BE RESTORED TO EXISTING GRADE AND STABILIZED WITHIN 3 DAYS AS SOON AS CONSTRUCTION PERMITS. THE PROJECT WILL ADD 0000 SF AREA OF IMPERVIOUS SURFACE WITH THE ADDITION OF THE WATER TANK ACCESS DRIVE AND THE WATER TANK ITSELF. RUNOFF FROM THE IMPERVIOUS AREA IS SHEET FLOW ACROSS WELL DEVELOPED GRASSED AREAS.
- ALL IMPROVEMENTS WILL CONFORM WITH THE CITY OF CUMMING CONSTRUCTION STANDARDS AND SPECIFICATIONS, LATEST EDITION.
- ALL UNDISTURBED BUFFERS SHALL BE IDENTIFIED WITH ORANGE, FOUR-FOOT TREE-SAVE FENCING PRIOR TO ANY LAND DISTURBANCE (UDC SEC. 18-10-1)
- OUTSIDE CONSTRUCTION ACTIVITY SHALL BE LIMITED TO THE HOURS OF 7:00 A.M. TO 7:00 P.M. MONDAY THROUGH FRIDAY, 8:00 A.M. TO 6:00 P.M. SATURDAY, AND NO OUTSIDE CONSTRUCTION ON SUNDAY (UDC 10-1-13).
- THIS PROJECT SITE IS WITHIN 200 FEET OF STATE WATERS.
- CONSTRUCTION WASTE MAY NOT BE BURNED OR BURIED AND MUST BE HAULED TO A STATE APPROVED LANDFILL.
- ALL UTILITY LINES SHALL BE INSTALLED UNDERGROUND.
- ALL DISTURBED AREAS SHALL BE RETURNED TO EXISTING GRADE AS SOON AS CONSTRUCTION PERMITS.
- MAXIMUM CUT SLOPES SHALL BE 2 HORIZONTAL TO 1 VERTICAL. CONTINUOUS FILL SLOPES TEN (10) FEET IN HEIGHT OR LESS MAY BE 2 HORIZONTAL TO 1 VERTICAL. ALL CONTINUOUS FILL SLOPES THAT EXCEED TEN (10) FEET IN HEIGHT MUST BE 3 HORIZONTAL TO 1 VERTICAL UNLESS: a) A MECHANICALLY ENGINEERED STABILIZED SLOPE IS APPROVED BY THE FORSYTH COUNTY DIRECTOR OF ENGINEERING; OR b) THE DESIGNED AND CONSTRUCTED SLOPES ARE CERTIFIED BY A REGISTERED ENGINEER EXPERIENCED IN GEOTECHNICAL ENGINEERING AND LICENSED IN THE STATE OF GEORGIA.

COUNTY NOTES:

- FORSYTH COUNTY UTILITY PERMIT REQUIRED. CONTACT ROBIN MCCOOK AT 770-781-2165 FOR UTILITY PERMIT INFORMATION.
- CONTACT SCOTT GUNTER AT (770) 781-2165 24 HOURS PRIOR TO WORKING WITHIN 400' OF ANY TRAFFIC SIGNAL.
- NOTIFY FORSYTH COUNTY INSPECTOR 24 HOURS BEFORE THE BEGINNING PHASE OF CONSTRUCTION. (770) 781-2165
- IRRIGATION SYSTEMS ARE PROHIBITED ON ALL EXISTING AND PROPOSED COUNTY RIGHT-OF-WAY AND CONSIDERED TO BE A VIOLATION OF THE COUNTY'S ORDINANCE PROHIBITING UN-PERMITTED RIGHT-OF-WAY ENCROACHMENTS.
- FULL SERVICE DRIVES WILL REVERT TO RIGHT IN / RIGHT OUT DRIVES IF FORSYTH COUNTY DETERMINES THEY ARE CREATING TRAFFIC PROBLEMS AND/OR ACCIDENTS OR IF ROAD IS WIDENED TO A MULT-LANE HIGHWAY WITH MEDIAN.
- NO STRUCTURES, FENCES OR OTHER OBSTRUCTIONS MAY BE LOCATED WITHIN A DRAINAGE OR ACCESS EASEMENT WITHOUT PRIOR APPROVAL BY THE FORSYTH COUNTY DEPARTMENT OF ENGINEERING.
- APPROVAL OF THESE PLANS DOES NOT CONSTITUTE APPROVAL BY

FORSYTH COUNTY OF ANY LAND DISTURBING ACTIVITIES WITHIN WETLAND AREAS. IT IS THE RESPONSIBILITY OF THE PROPERTY OWNER TO CONTACT THE APPROPRIATE REGULATORY AGENCY FOR APPROVAL OF ANY WETLAND AREA DISTURBANCE.

- MAXIMUM CUT SLOPES SHALL BE 2 HORIZONTAL TO 1 VERTICAL. CONTINUOUS FILL SLOPES TEN (10) FEET IN HEIGHT OR LESS MAY BE 2 HORIZONTAL TO 1 VERTICAL. ALL CONTINUOUS FILL SLOPES THAT EXCEED TEN (10) FEET IN HEIGHT MUST BE 3 HORIZONTAL TO 1 VERTICAL UNLESS: a) A MECHANICALLY ENGINEERED STABILIZED SLOPE IS APPROVED BY THE FORSYTH COUNTY DIRECTOR OF ENGINEERING; OR b) THE DESIGNED AND CONSTRUCTED SLOPES ARE CERTIFIED BY A REGISTERED ENGINEER EXPERIENCED IN GEOTECHNICAL ENGINEERING AND LICENSED IN THE STATE OF GEORGIA.
- APPROVAL OF THESE PLANS BY FORSYTH COUNTY IS SUBJECT TO AND CONTINGENT UPON THE APPLICANT OBTAINING ANY AND ALL NECESSARY APPROVALS FROM ANY AND ALL APPLICABLE AGENCIES INCLUDING, BUT NOT LIMITED TO THE UNITED STATES ARMY CORPS OF ENGINEERS, THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, THE USDA-NRCS, GEORGIA DEPARTMENT OF NATURAL RESOURCES, GEORGIA ENVIRONMENTAL PROTECTION DIVISION, AND THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION.
- THIS DEVELOPMENT IS EXCEPTED FROM THE GEORGIA STORMWATER MANAGEMENT MANUAL AND FORSYTH COUNTY ADDENDUM TO THE GEORGIA STORMWATER MANAGEMENT MANUAL AS LESS THAN 5000 SF WILL BE DISTURBED.

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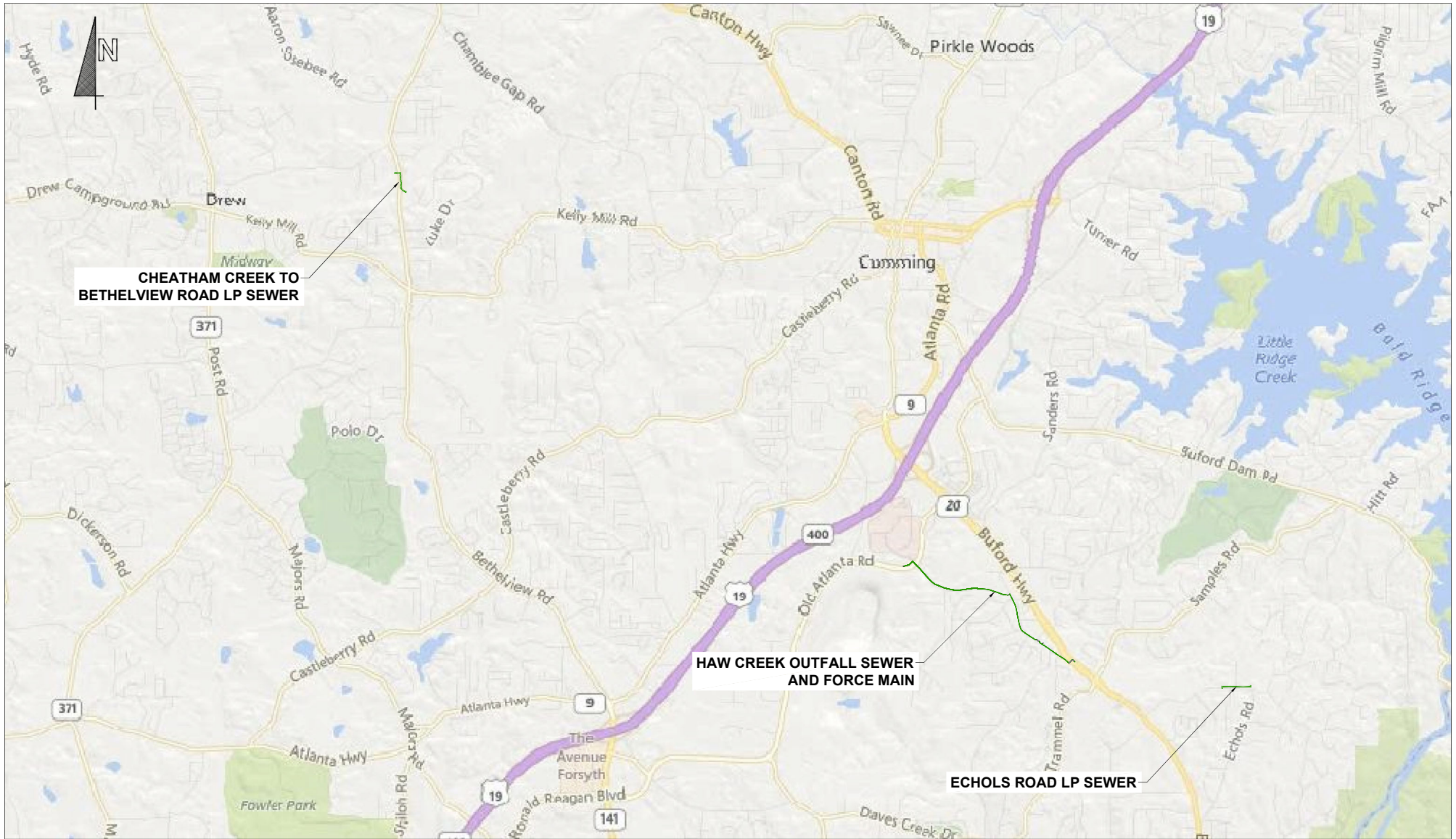


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Liang Wang

LIANG WANG, P.E.
GSWCC NO. 0000083427



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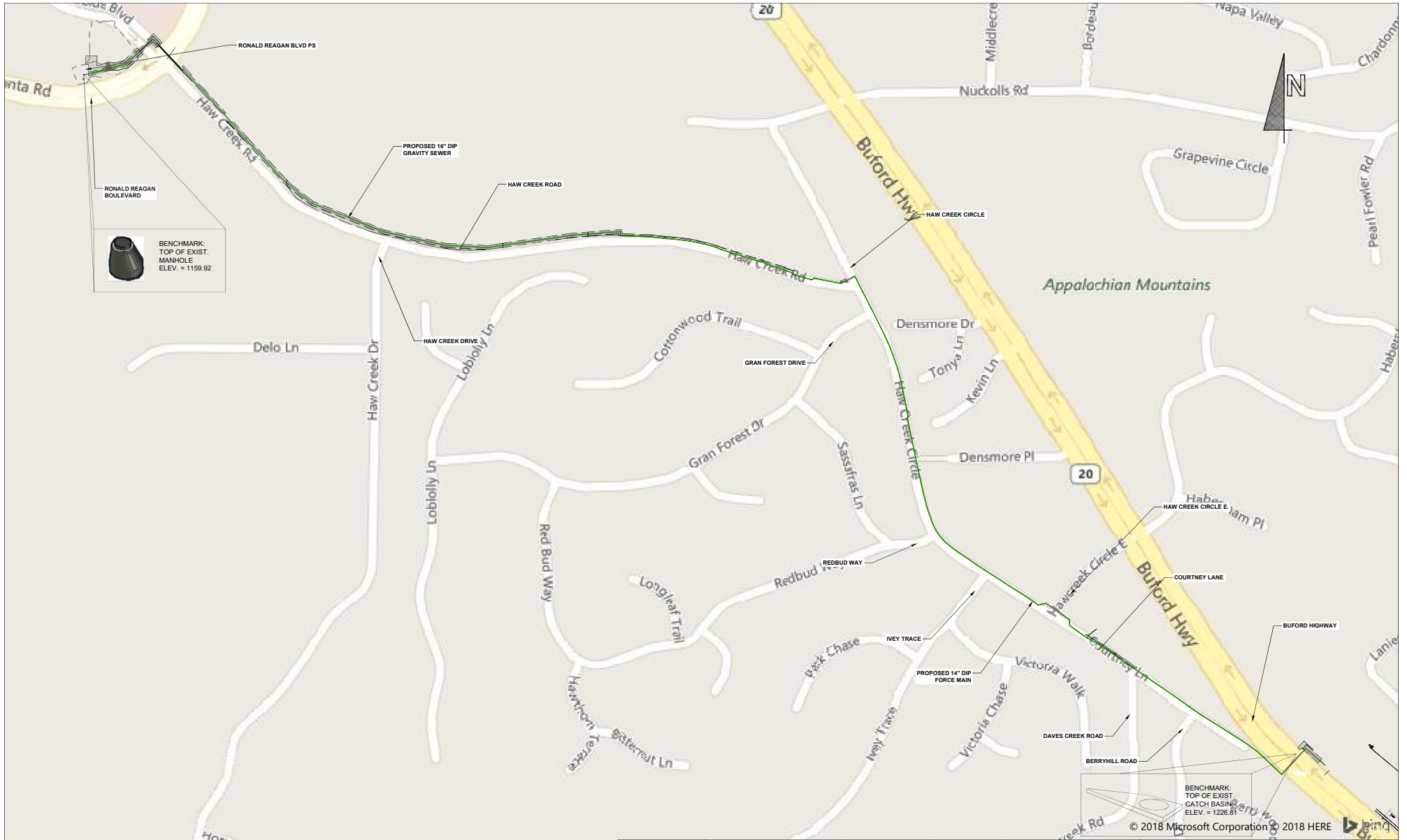
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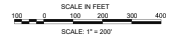


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CITY OF CUMMING	
HAW CREEK ROAD OUTFALL AND FORCE MAIN	
SITE LOCATIONS	
DATE: 10/09/2019	SHEET 2 OF 36



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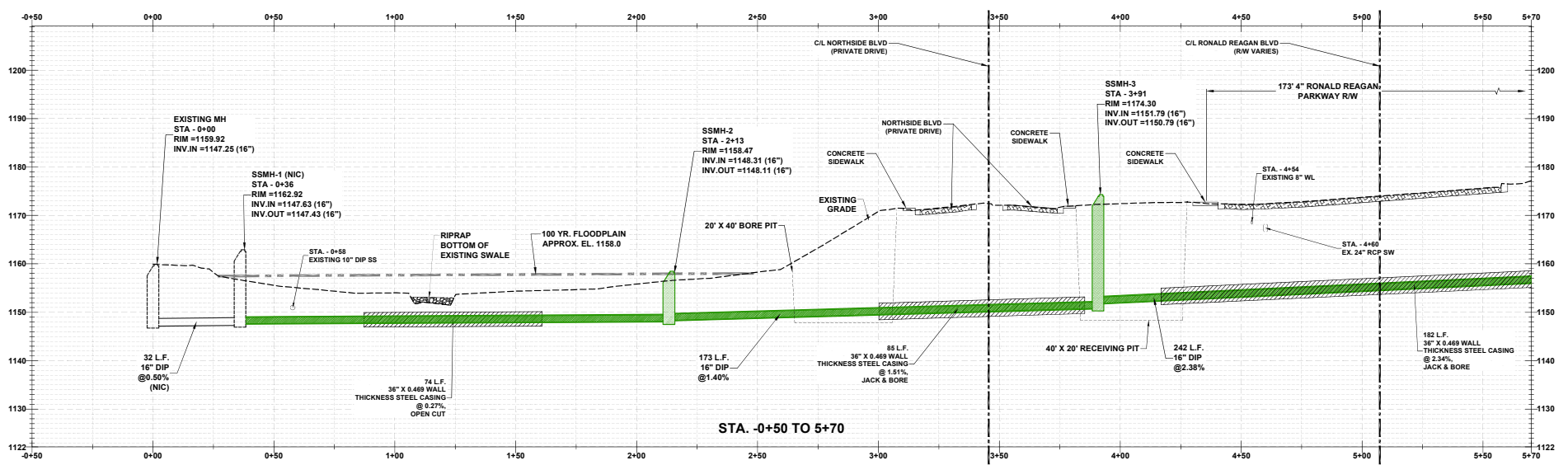
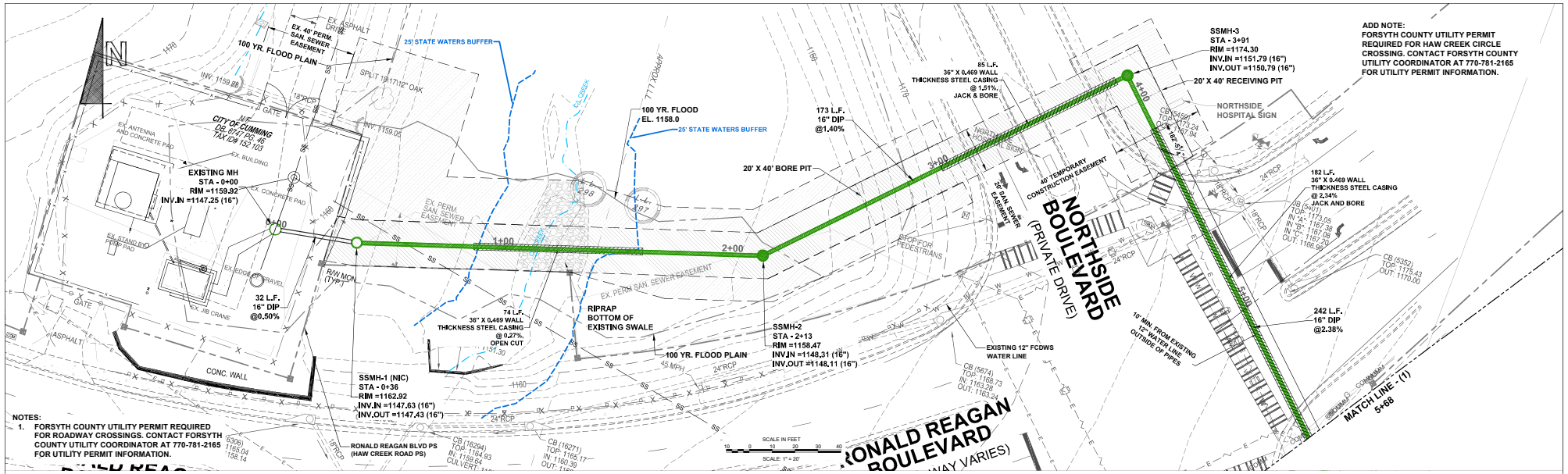


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HAW CREEK ROAD OUTFALL AND FORCE MAIN	
OVERALL SITE PLAN	
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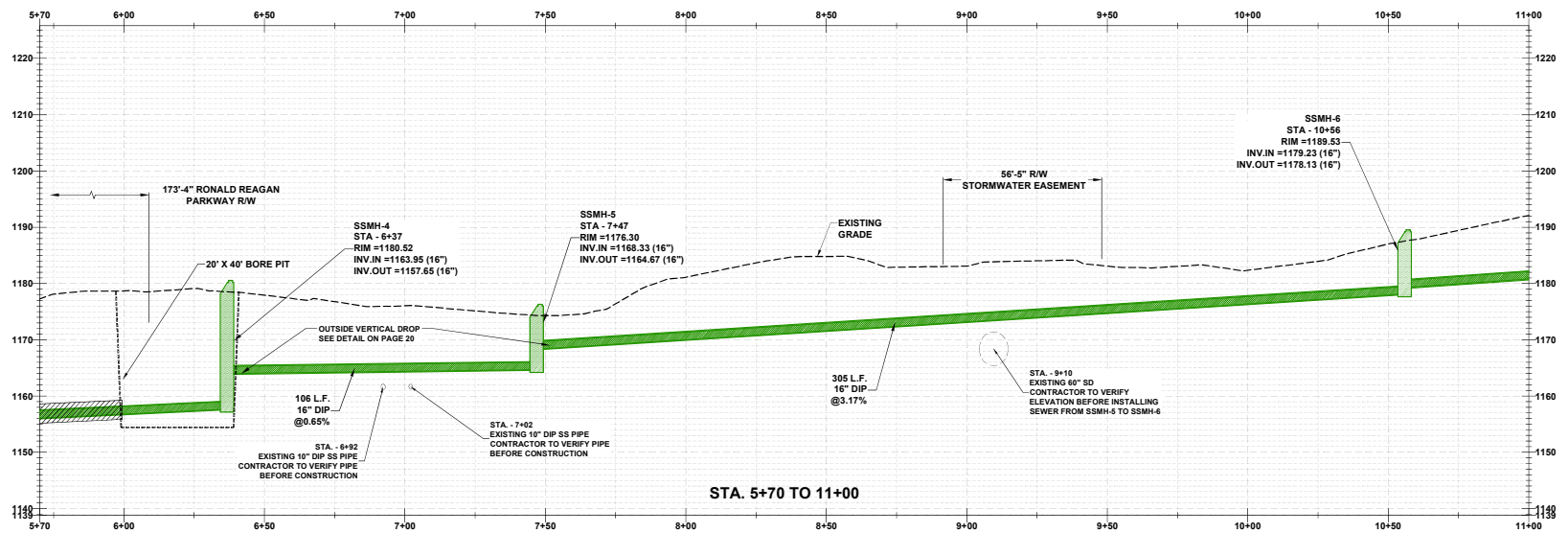
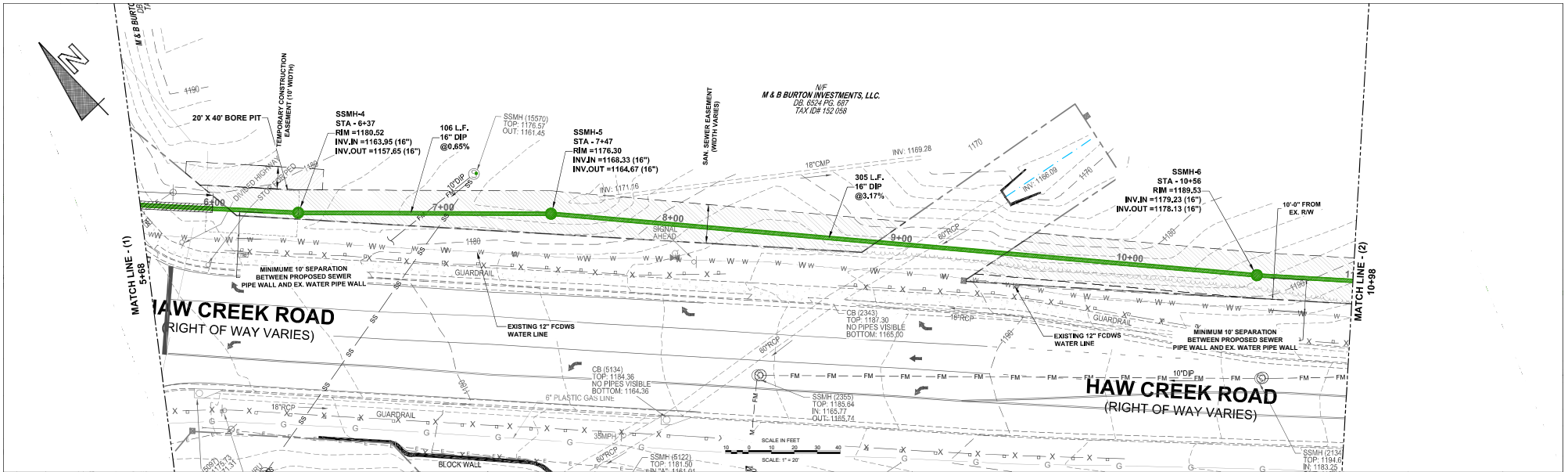


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CITY OF CUMMING	
HAW CREEK ROAD OUTFALL AND FORCE MAIN	
PLAN & PROFILE - (1)	
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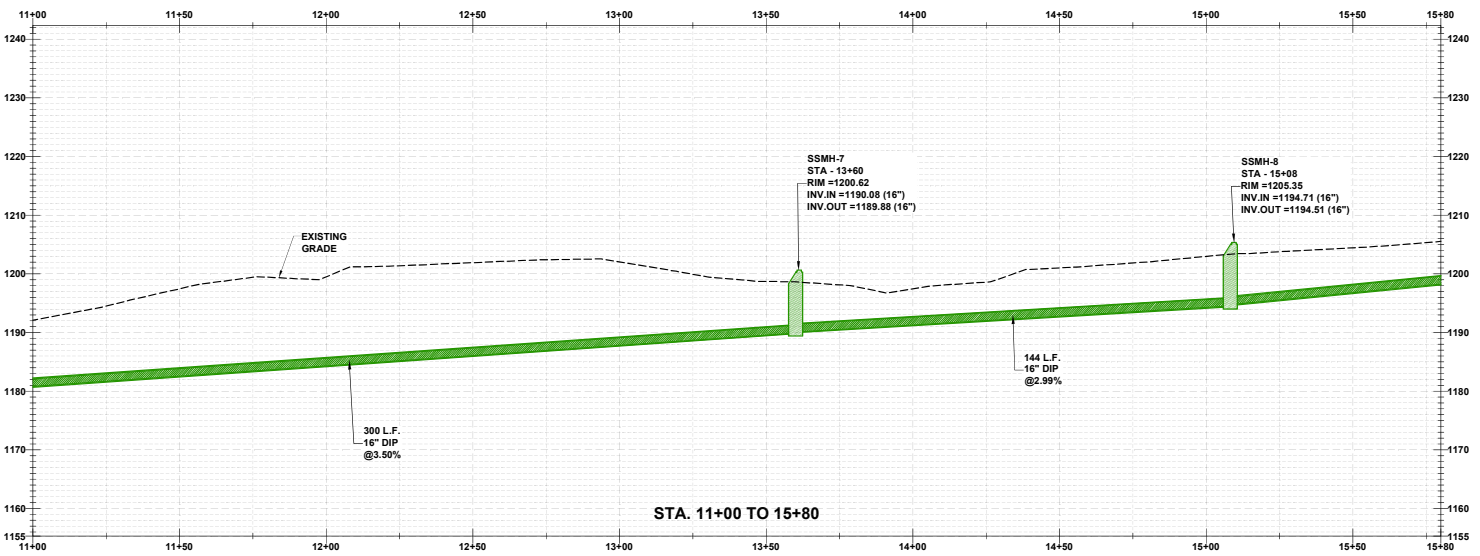
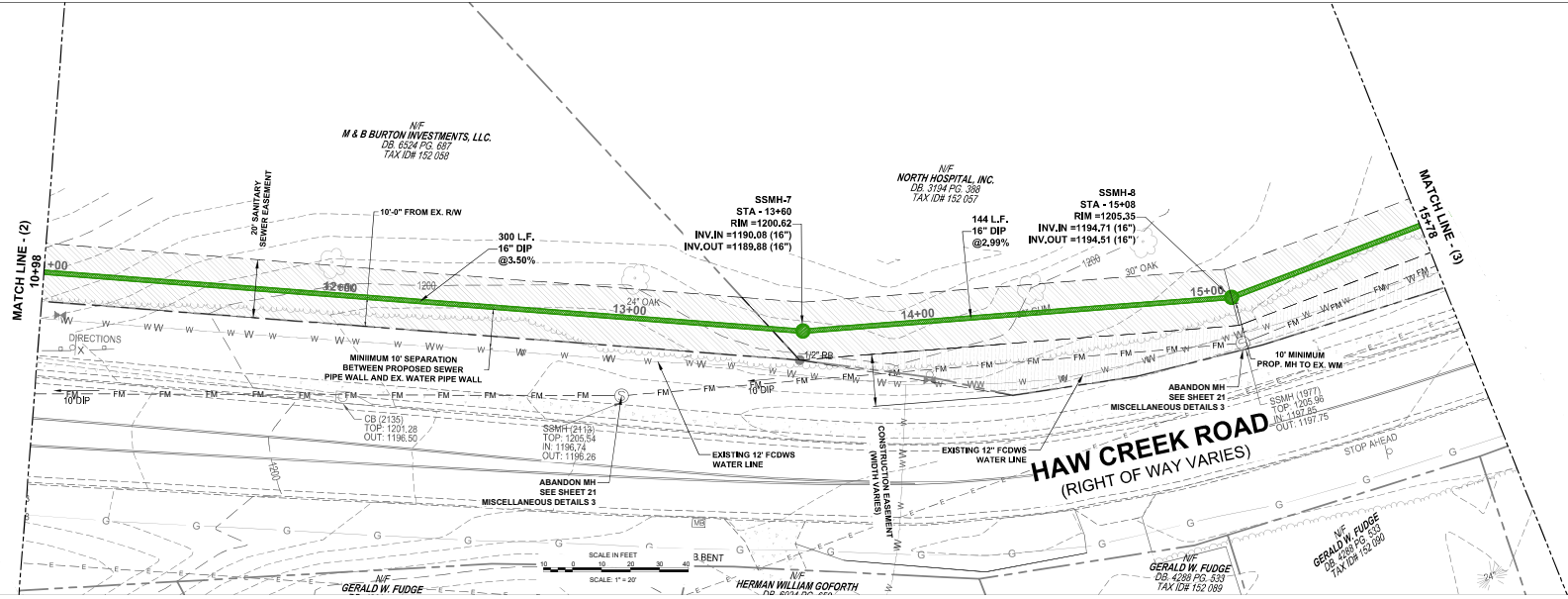


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CITY OF CUMMING	
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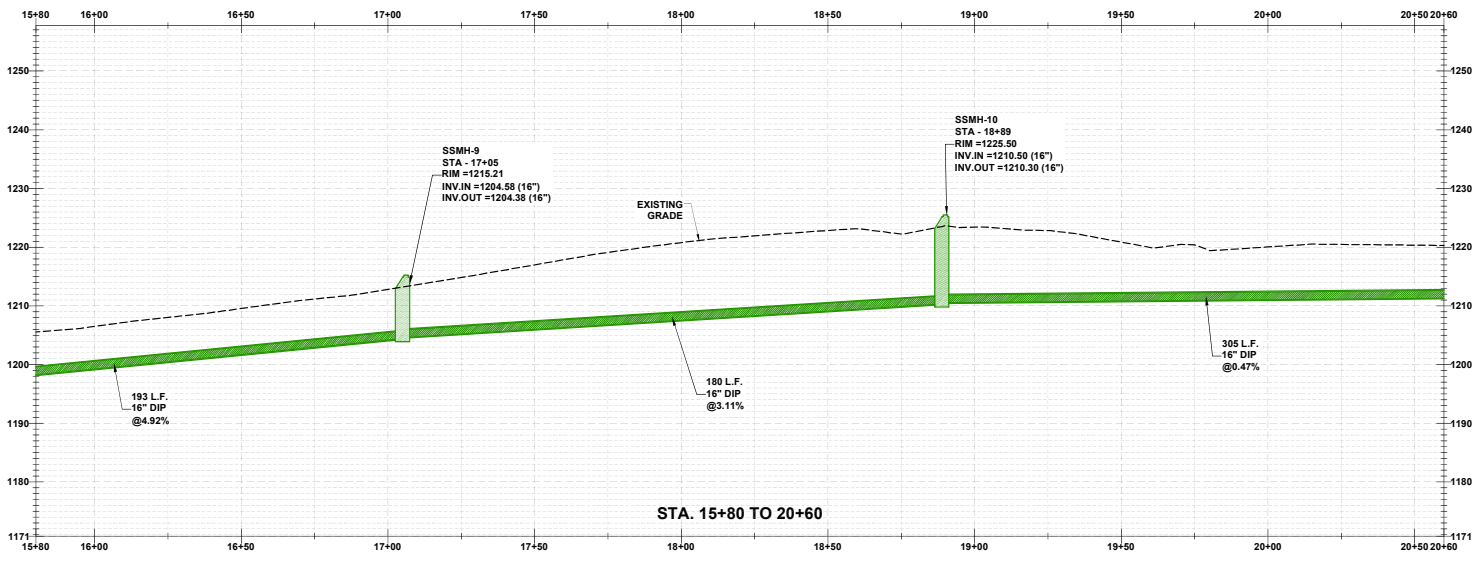
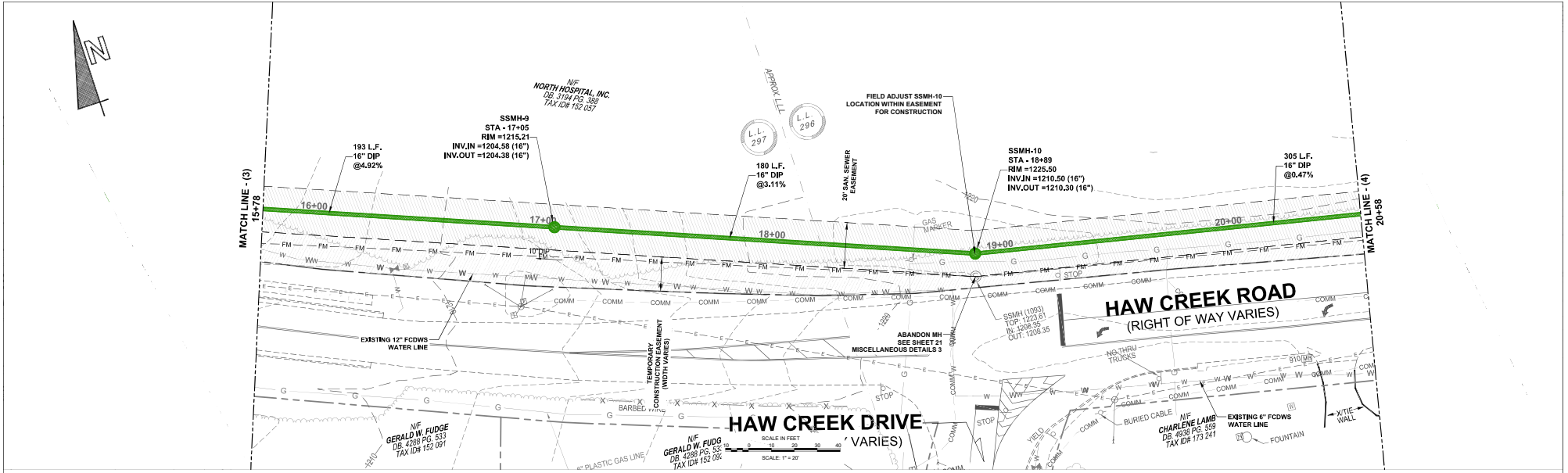


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HAW CREEK ROAD OUTFALL AND FORCE MAIN	
PLAN & PROFILE - (3)	
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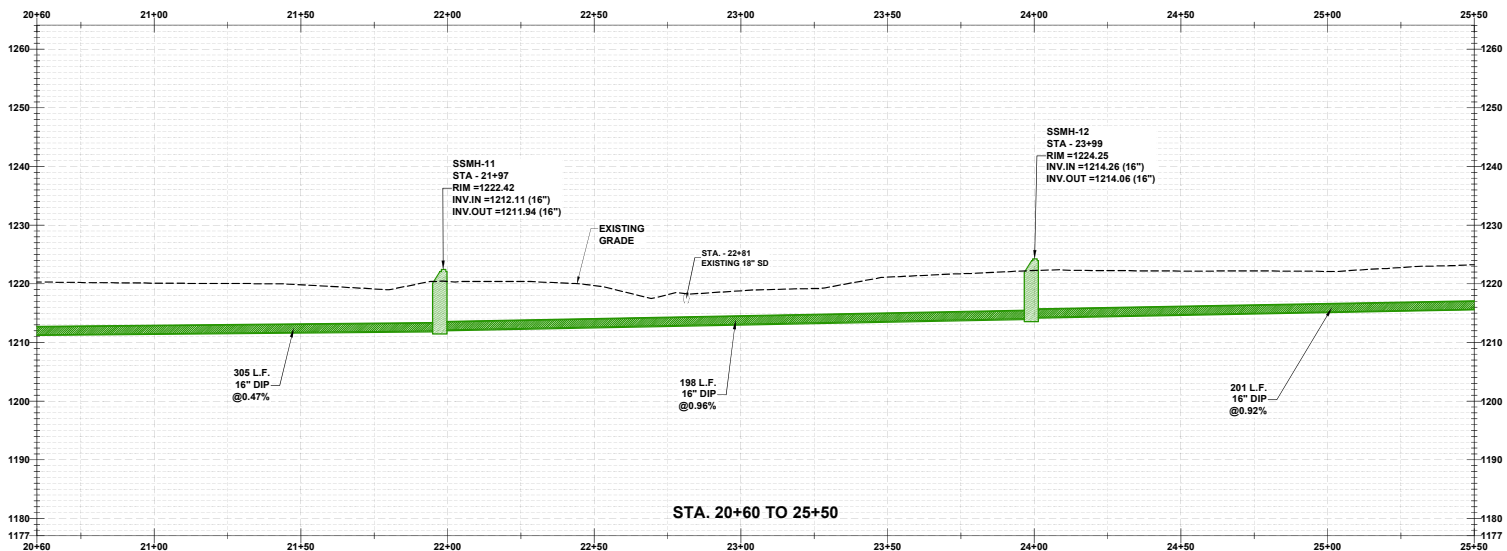
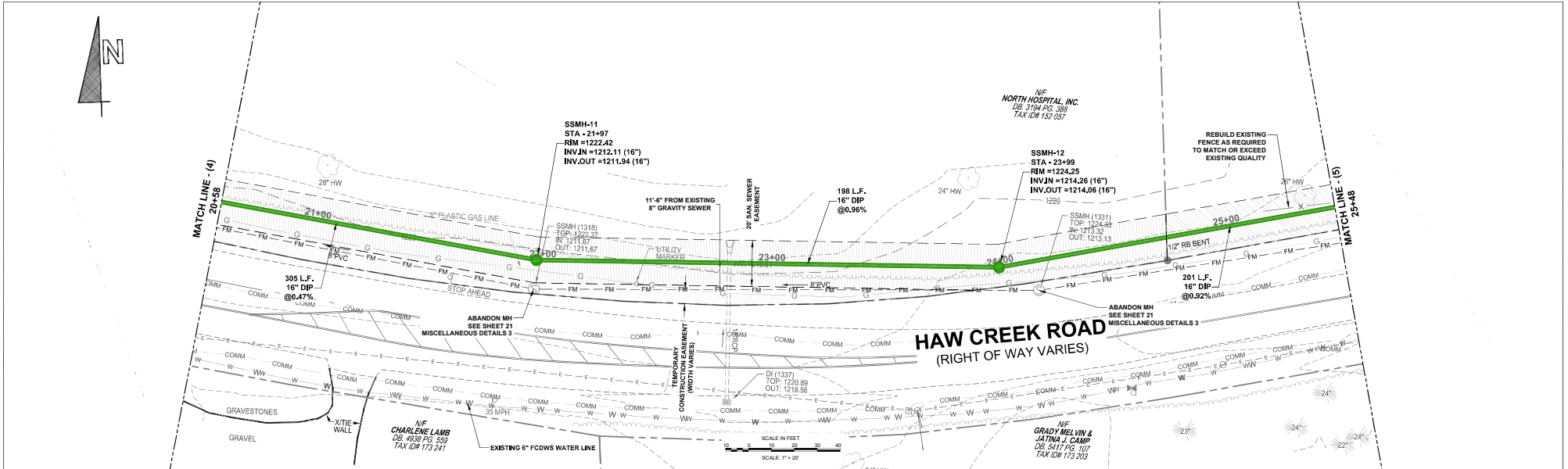


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CITY OF CUMMING	
HAW CREEK ROAD OUTFALL AND FORCE MAIN	
PLAN & PROFILE - (4)	
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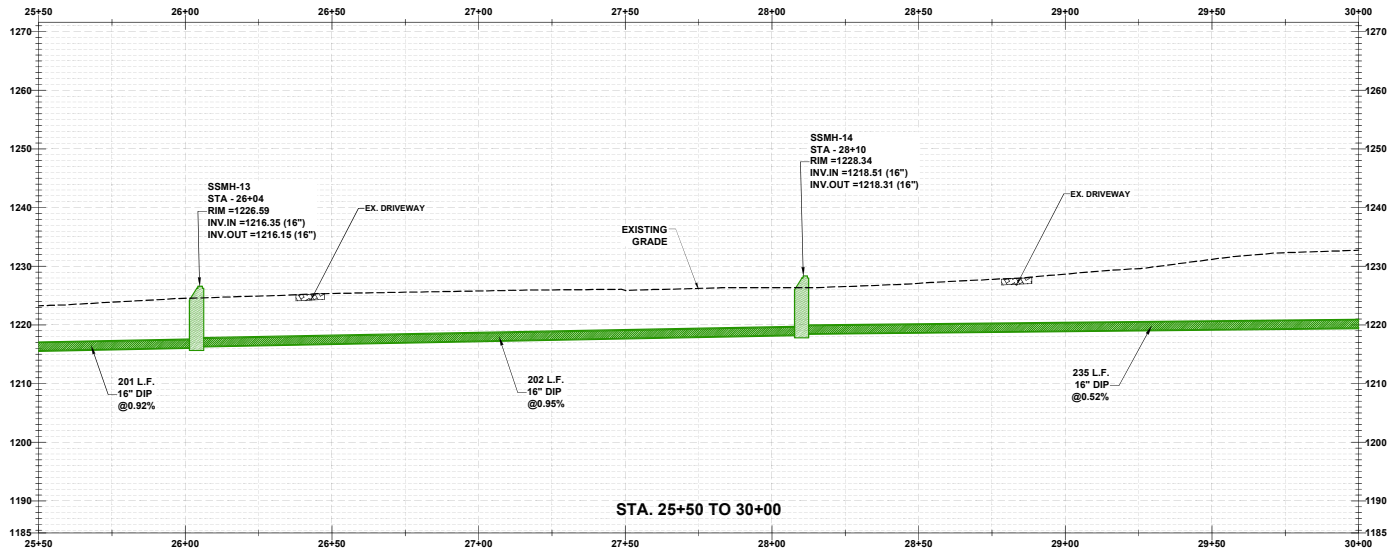
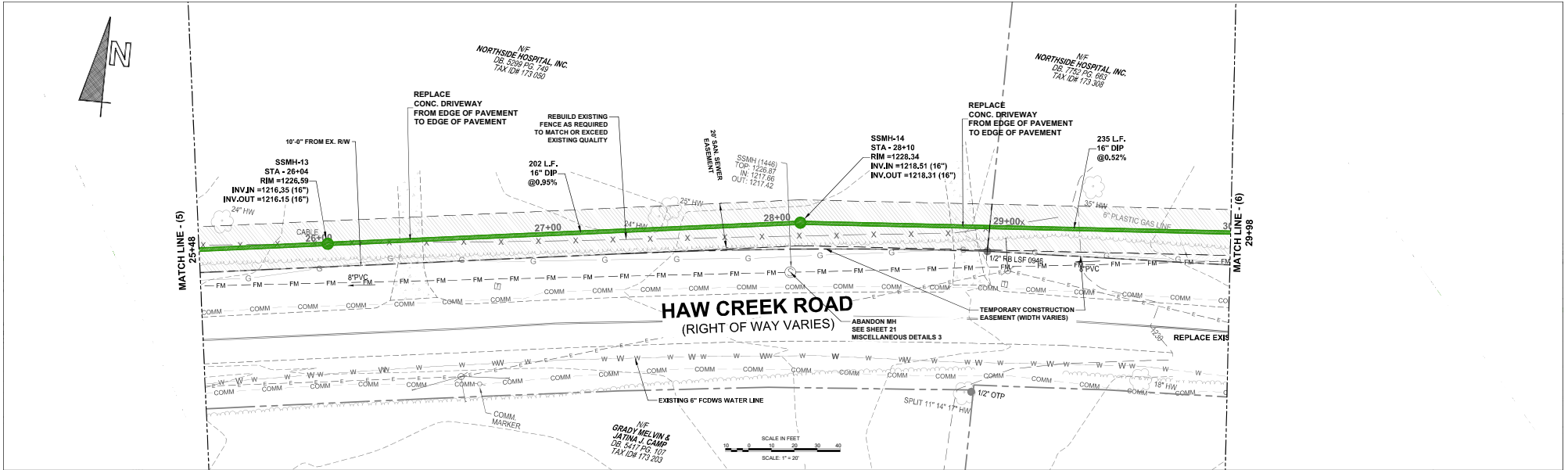


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PLAN & PROFILE - (5)	
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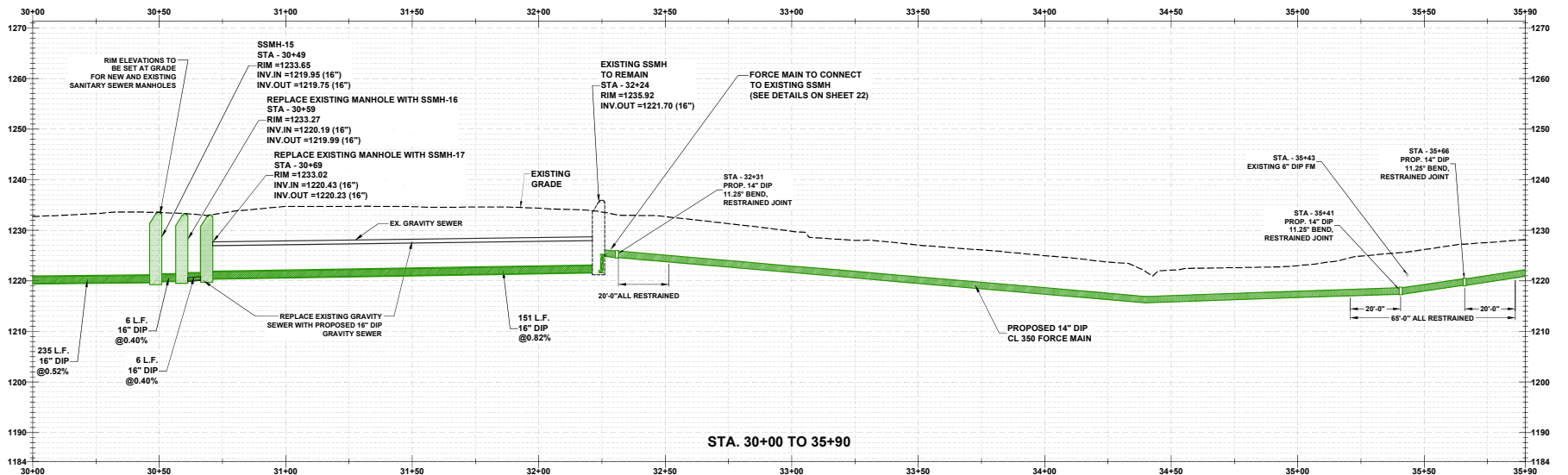
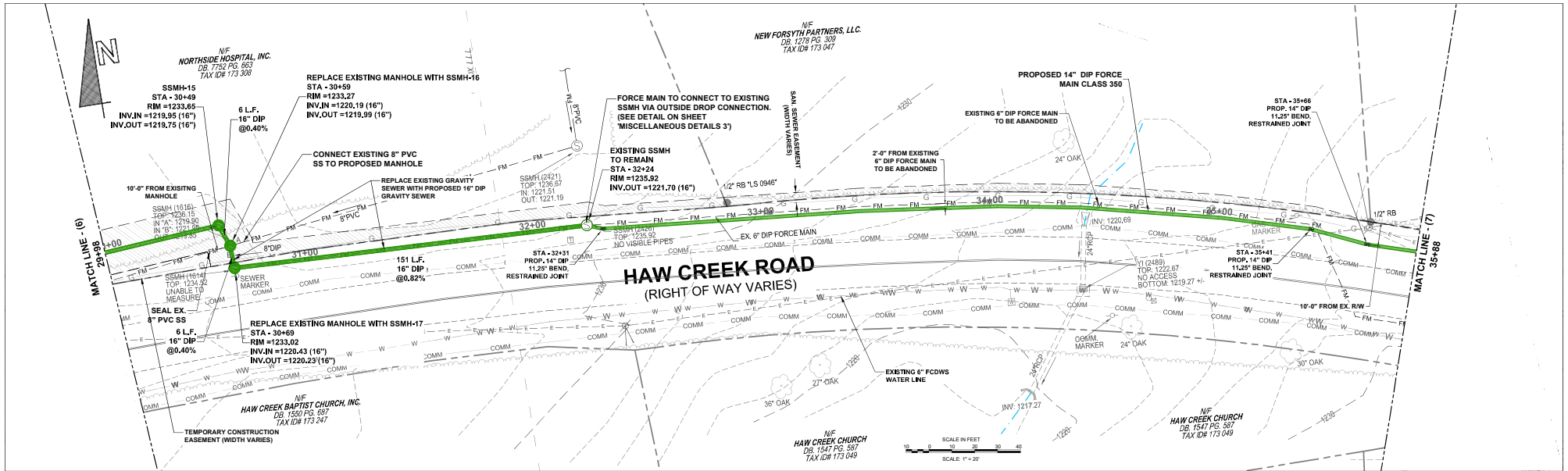


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PLAN & PROFILE - (6)	
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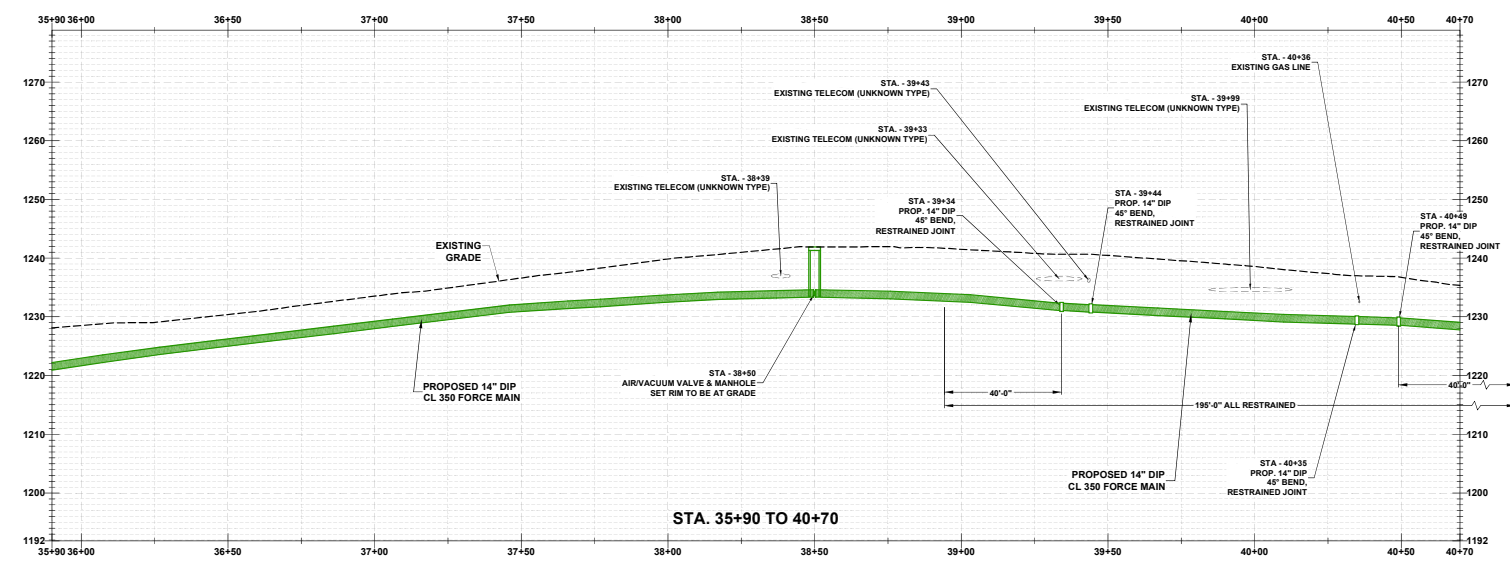
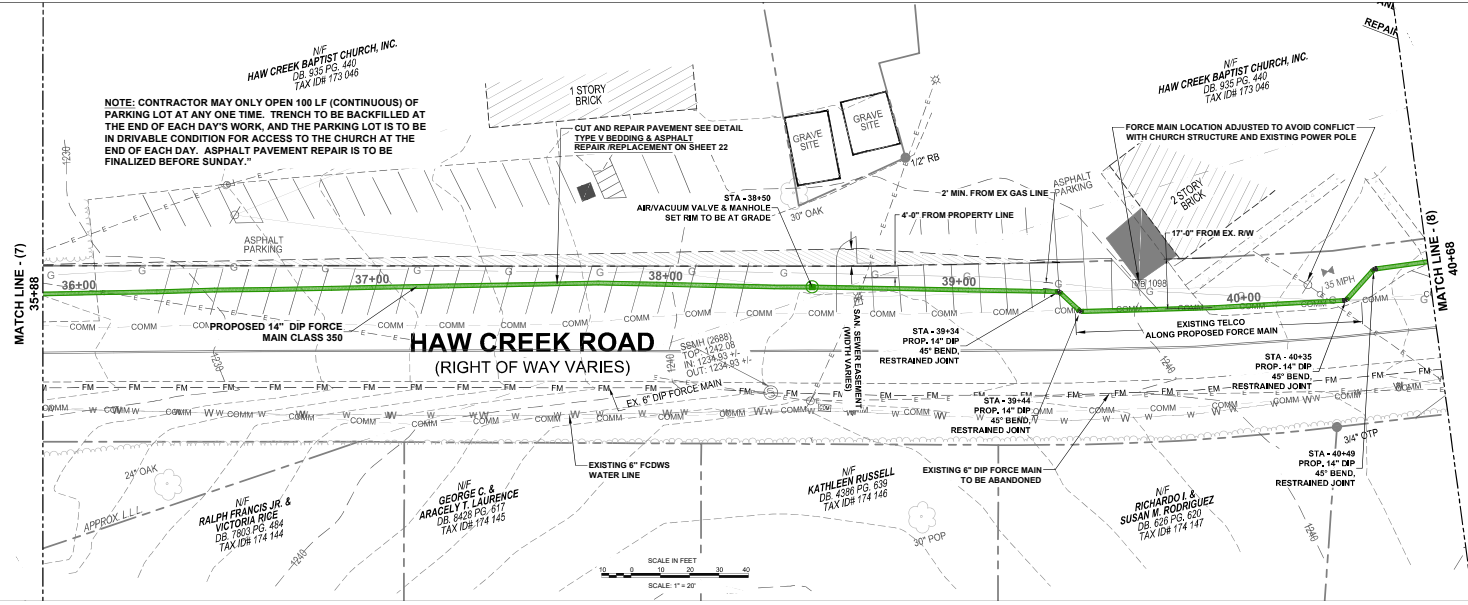


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DATE	DESCRIPTION	

CITY OF CUMMING	
HAW CREEK ROAD OUTFALL AND FORCE MAIN	
PLAN & PROFILE - (7)	
DATE: 10/09/2019	SHEET 10 OF 36



NOTE: CONTRACTOR MAY ONLY OPEN 100 LF (CONTINUOUS) OF PARKING LOT AT ANY ONE TIME. TRENCH TO BE BACKFILLED AT THE END OF EACH DAY'S WORK, AND THE PARKING LOT IS TO BE IN DRIVABLE CONDITION FOR ACCESS TO THE CHURCH AT THE END OF EACH DAY. ASPHALT PAVEMENT REPAIR IS TO BE FINALIZED BEFORE SUNDAY.



SCALE:
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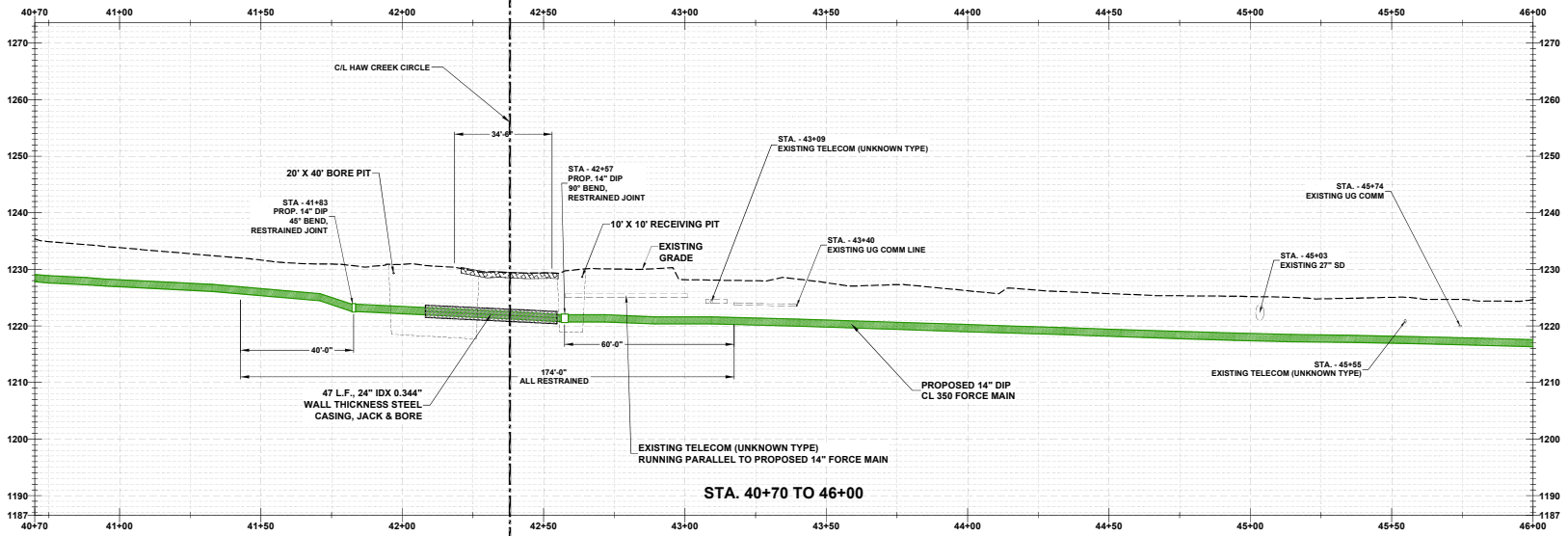
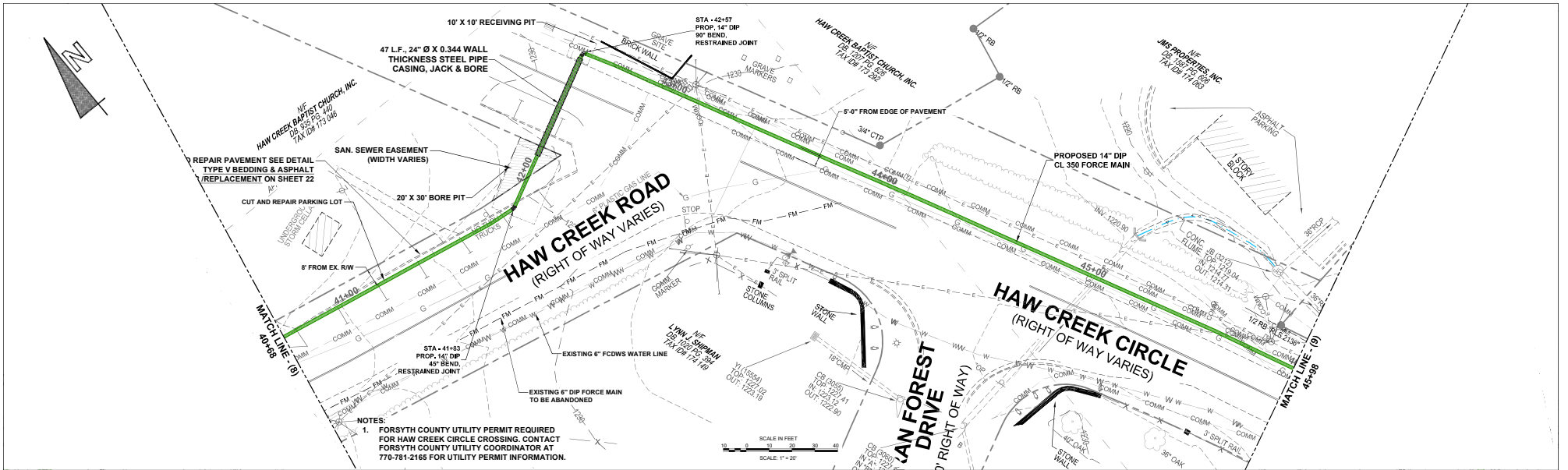
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DATE	DESCRIPTION	
10/16/19	BID READY	

CITY OF CUMMING	
HAW CREEK ROAD OUTFALL AND FORCE MAIN	
PLAN & PROFILE - (8)	
DATE: 10/09/2019	SHEET 11 OF 36

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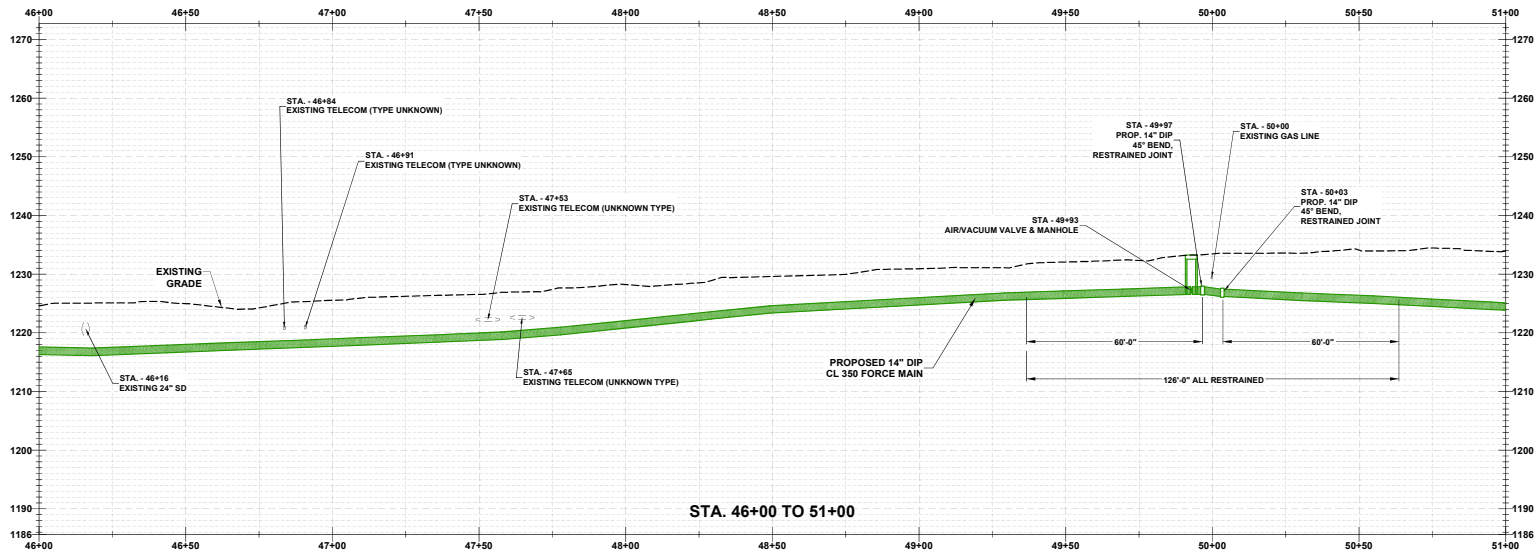
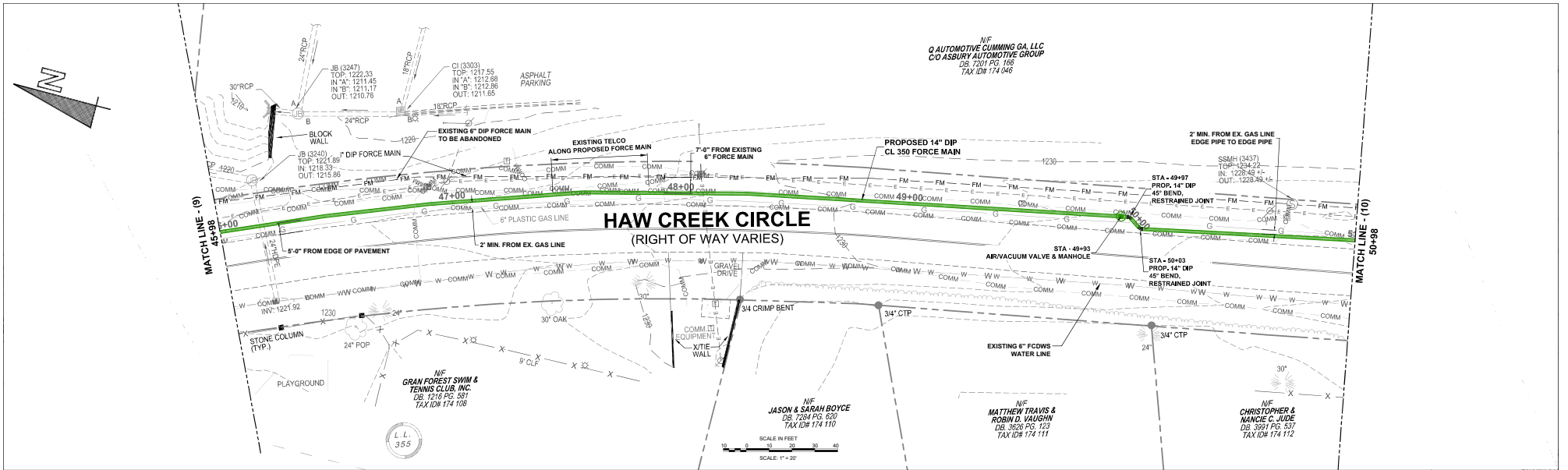


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CITY OF CUMMING	
HAW CREEK ROAD OUTFALL AND FORCE MAIN	
PLAN & PROFILE - (9)	
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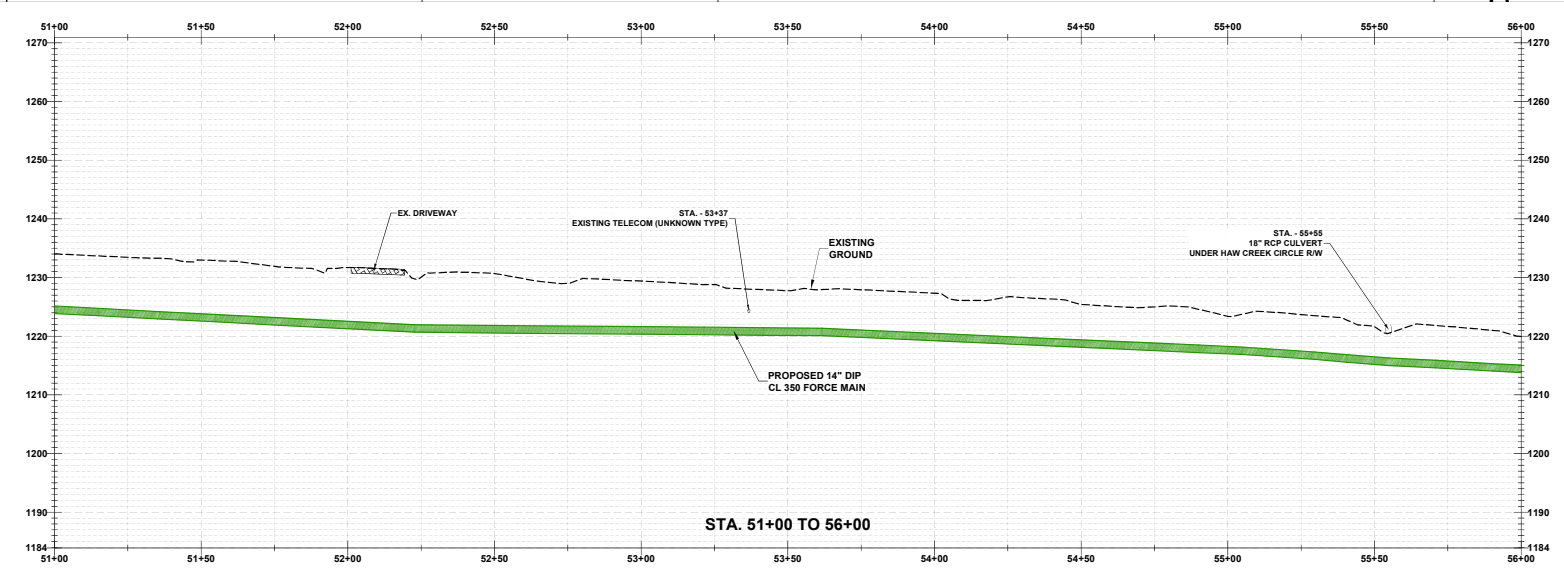
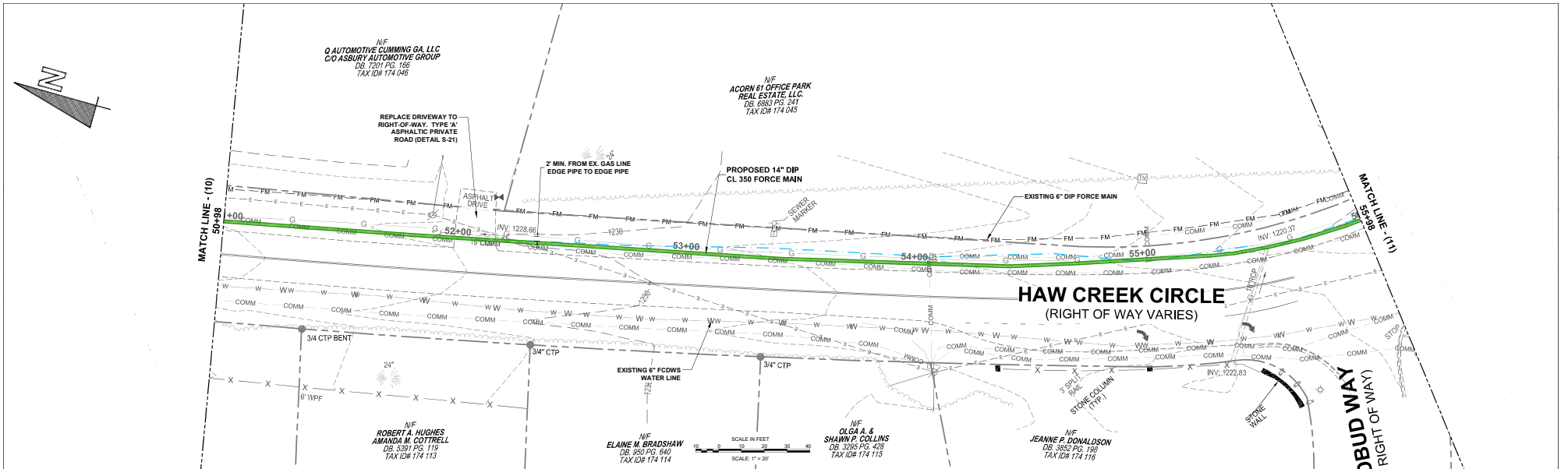


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PLAN & PROFILE - (10)	
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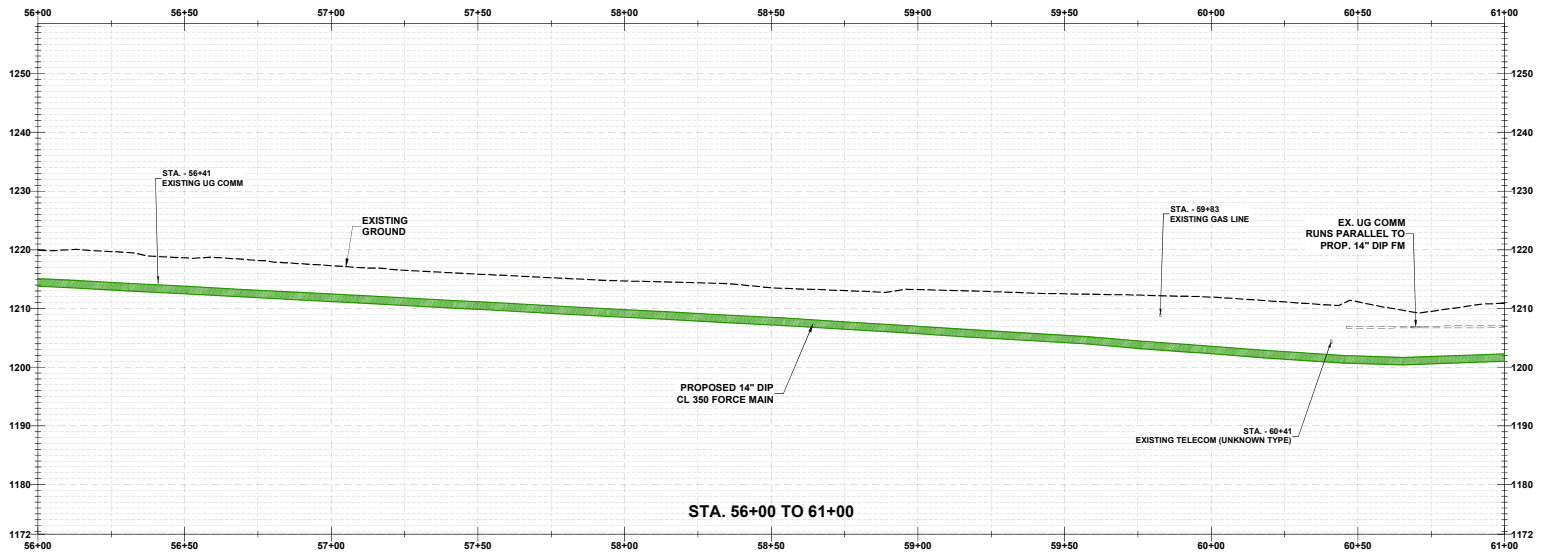
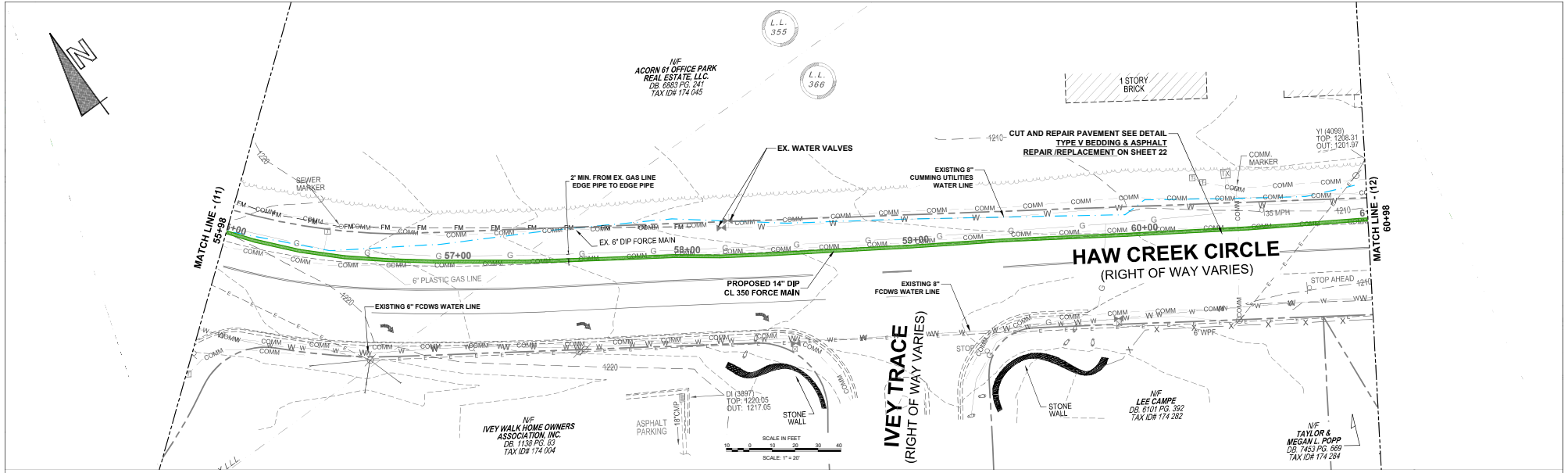


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HAW CREEK ROAD OUTFALL AND FORCE MAIN	
PLAN & PROFILE - (11)	
DATE: 10/09/2019	SHEET 14 OF 36



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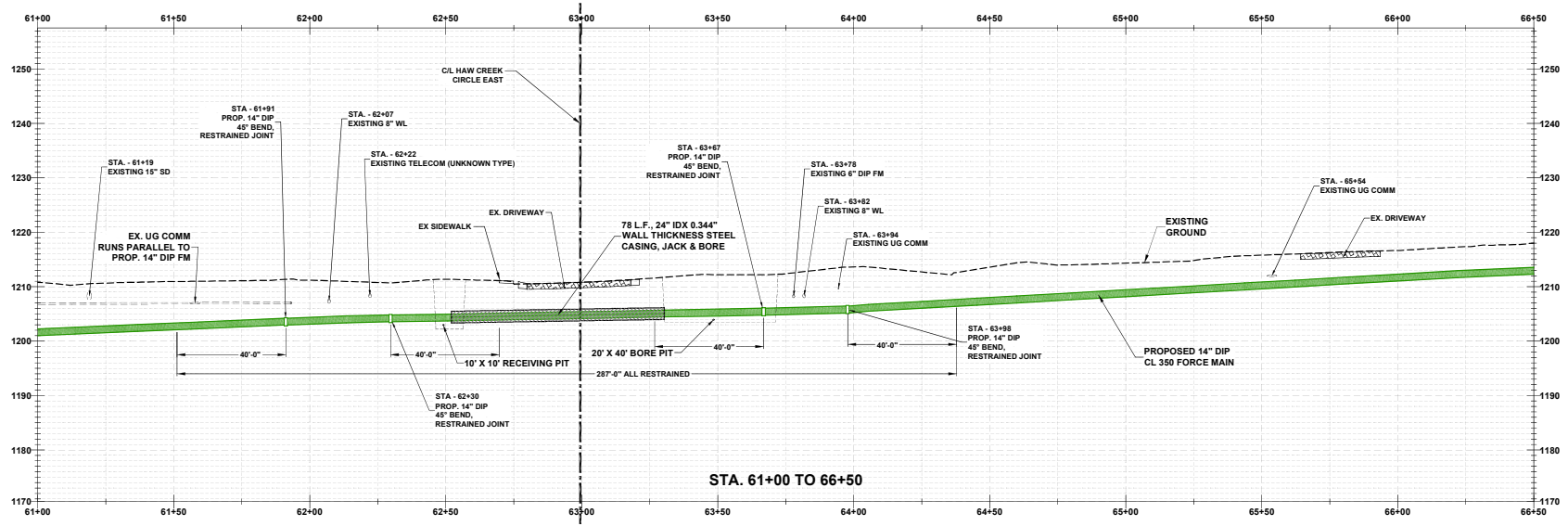
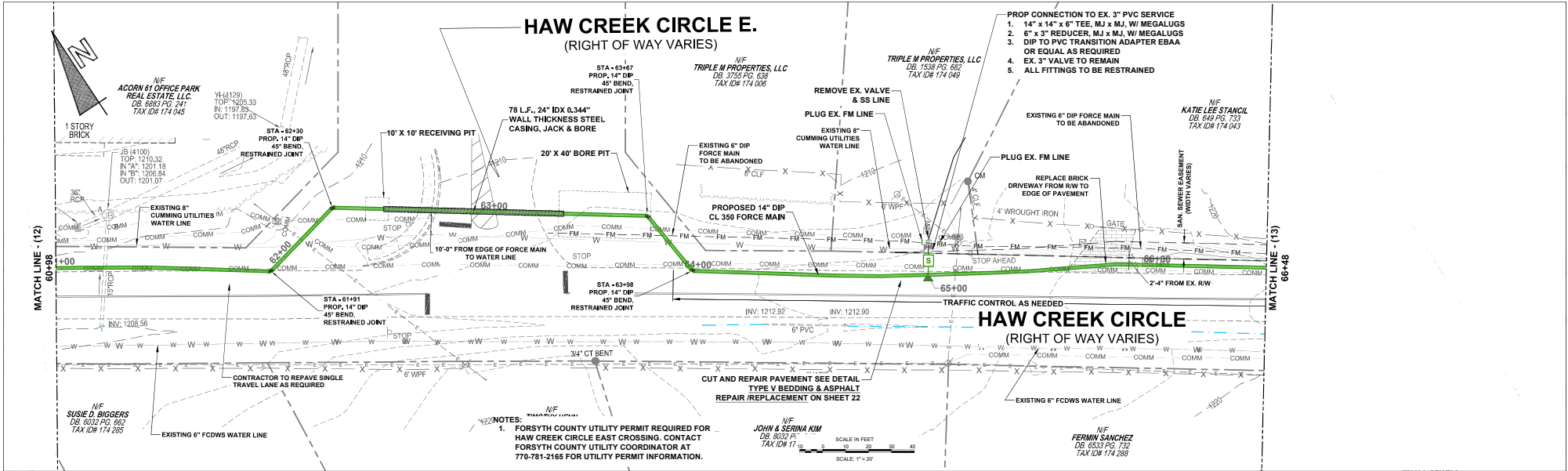


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PLAN & PROFILE - (12)	
DATE: 10/09/2019	SHEET 15 OF 36



SCALE:
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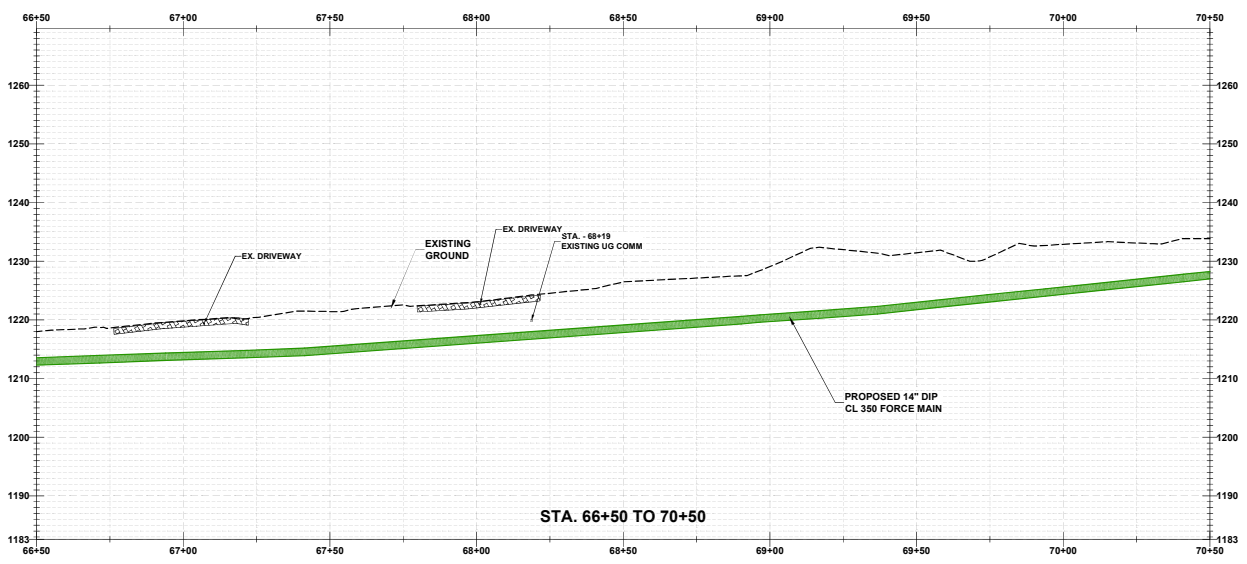
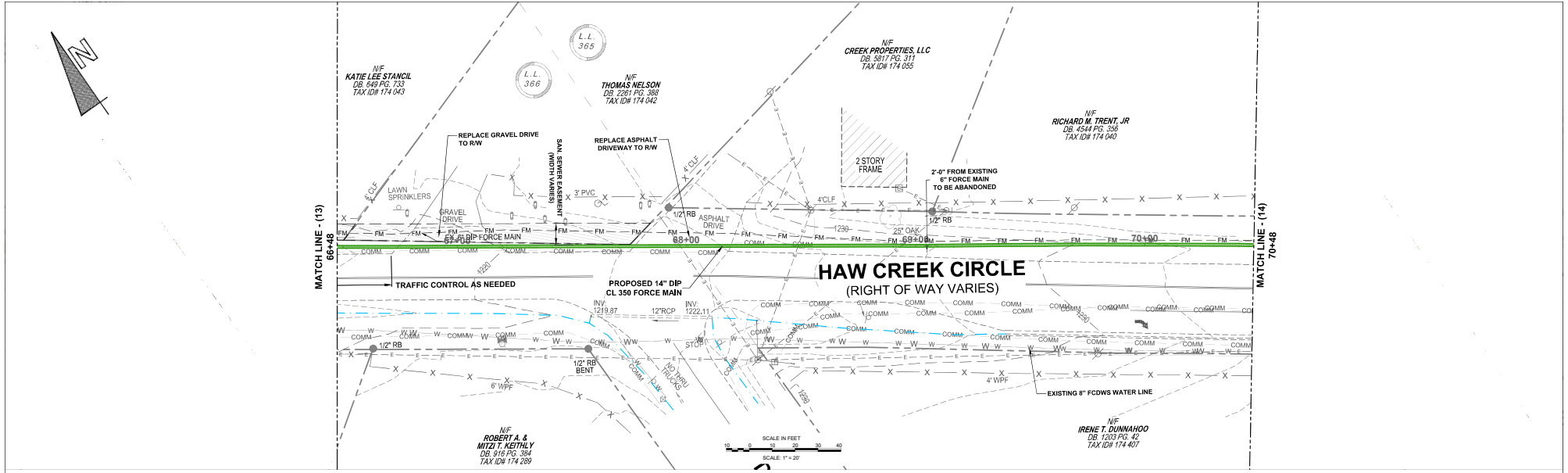
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HAW CREEK ROAD OUTFALL AND FORCE MAIN	
PLAN & PROFILE - (13)	
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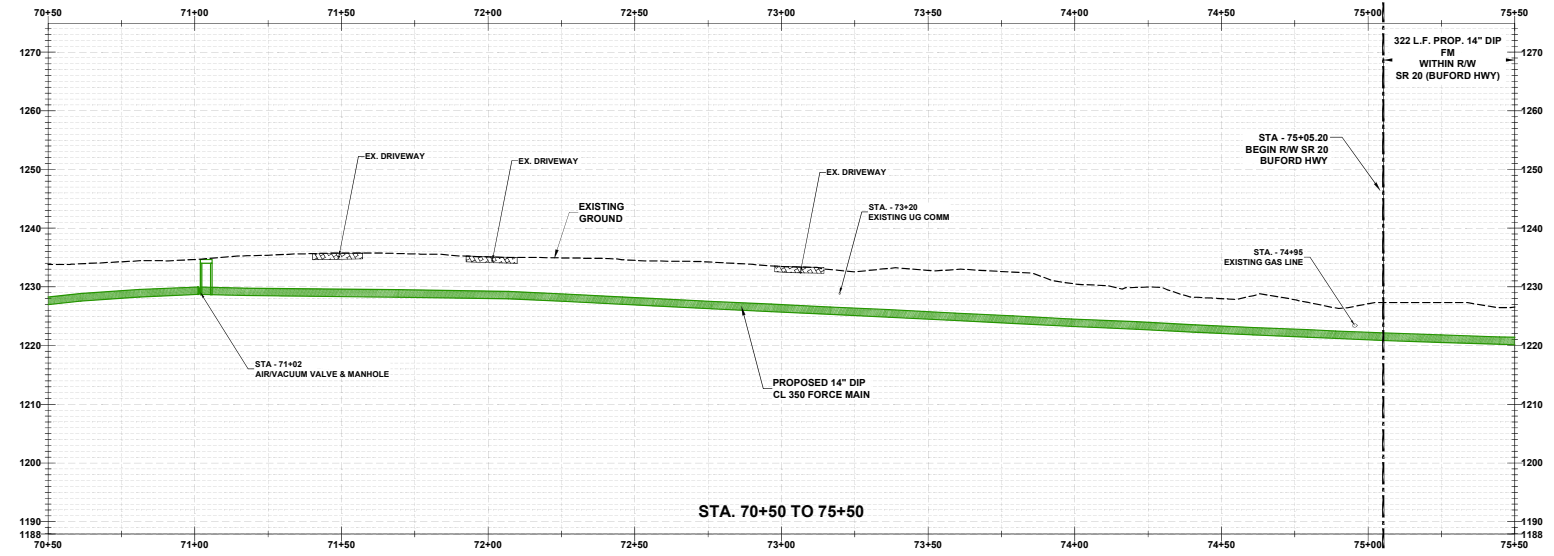
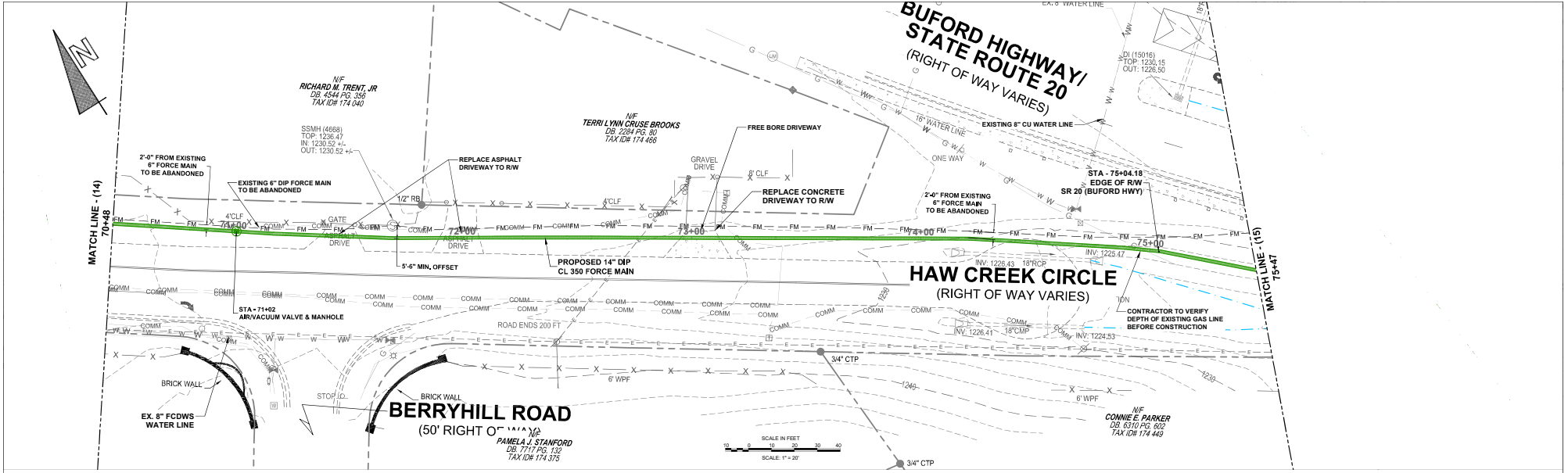


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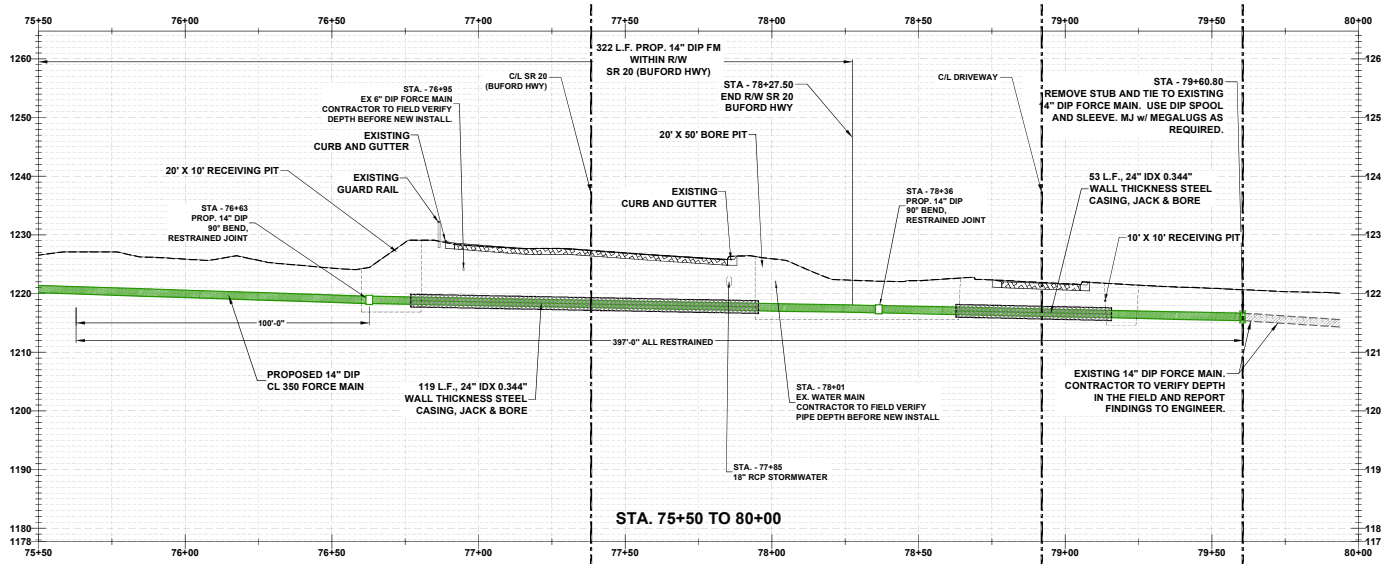
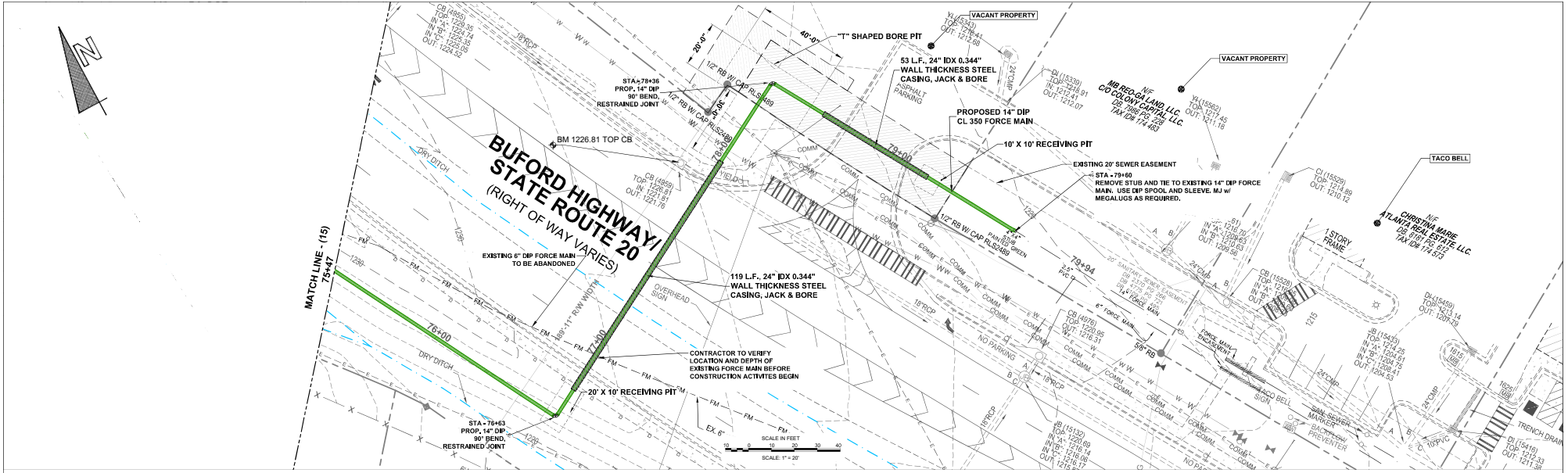


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DATE: 10/09/2019	SHEET 18 OF 36



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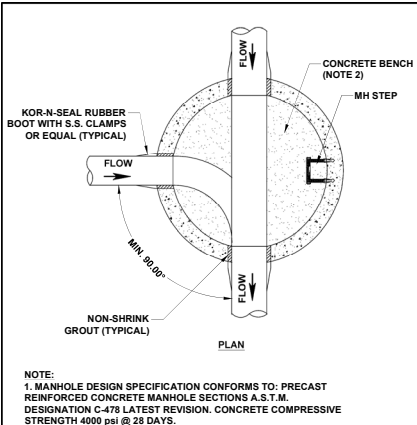


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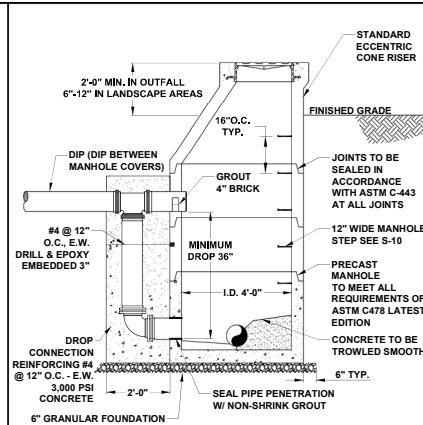
CITY OF CUMMING	
HAW CREEK ROAD OUTFALL AND FORCE MAIN	
PLAN & PROFILE - (16)	
DATE: 10/09/2019	SHEET 19 OF 36



NOTE:
1. MANHOLE DESIGN SPECIFICATION CONFORMS TO: PRECAST REINFORCED CONCRETE MANHOLE SECTIONS A.S.T.M. DESIGNATION C-478 LATEST REVISION. CONCRETE COMPRESSIVE STRENGTH 4000 psi @ 28 DAYS.
2. CONCRETE BENCH & INVERT SHALL BE TROWLED SMOOTH

CITY OF CUMMING
DEPARTMENT OF UTILITIES
MANHOLE PLAN

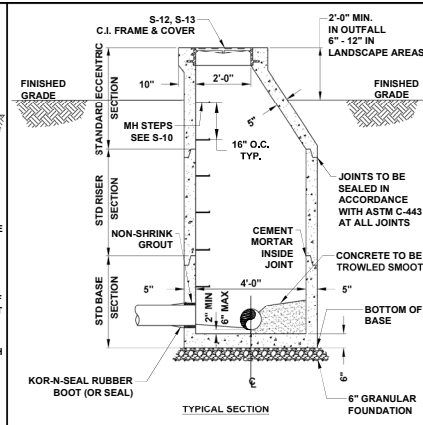
DETAIL NUMBER: **S-5**
SCALE: NOT TO SCALE
LATEST REVISION: 07/14/2017



NOTE:
ALL DROP PIPE AND FITTINGS SHALL BE DUCTILE IRON

CITY OF CUMMING
DEPARTMENT OF UTILITIES
OUTSIDE VERTICAL DROP

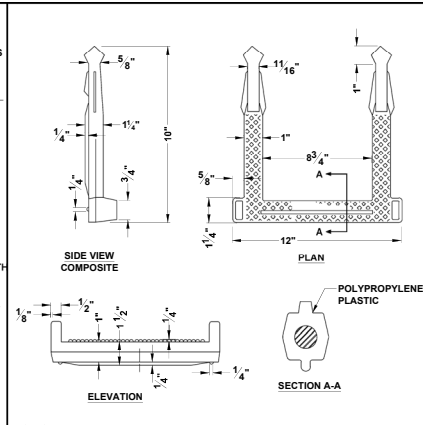
DETAIL NUMBER: **S-6**
SCALE: NOT TO SCALE
LATEST REVISION: 07/14/2017



NOTE:
MANHOLE DESIGN SPECIFICATION CONFORMS TO: PRECAST REINFORCED CONCRETE MANHOLE SECTIONS A.S.T.M. DESIGNATION C-478 LATEST REVISION. CONCRETE COMPRESSIVE STRENGTH 4000 psi @ 28 DAYS.

CITY OF CUMMING
DEPARTMENT OF UTILITIES
MANHOLE OUTFALL

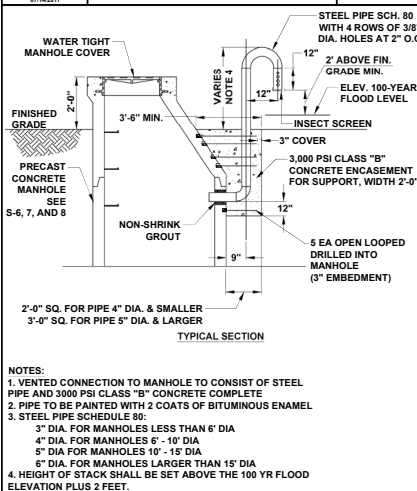
DETAIL NUMBER: **S-8**
SCALE: NOT TO SCALE
LATEST REVISION: 07/14/2017



NOTES:
1. STEPS DIFFERING IN DIMENSIONS, CONFIGURATION, OR MATERIALS FROM THOSE SHOWN MAY ALSO BE USED PROVIDED THE CONTRACTOR HAS FURNISHED DETAILS OF THE PROPOSED STEPS AND HAS RECEIVED WRITTEN APPROVAL FROM THE CITY
2. ALL STEPS SHALL PROTRUDE 4" FROM INSIDE FACE OF STRUCTURE WALL.

CITY OF CUMMING
DEPARTMENT OF UTILITIES
MANHOLE STEPS

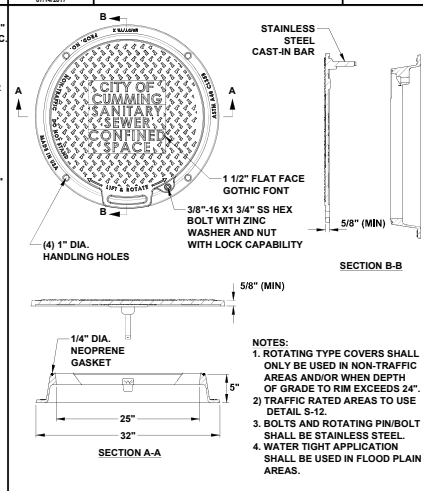
DETAIL NUMBER: **S-10**
SCALE: NOT TO SCALE
LATEST REVISION: 07/14/2017



NOTES:
1. VENTED CONNECTION TO MANHOLE TO CONSIST OF STEEL PIPE AND 3000 PSI CLASS "B" CONCRETE COMPLETE
2. PIPE TO BE PAINTED WITH 2 COATS OF BITUMINOUS ENAMEL
3. STEEL PIPE SCHEDULE 80
3" DIA. FOR MANHOLES LESS THAN 6' DIA
4" DIA. FOR MANHOLES 6' - 10' DIA
5" DIA. FOR MANHOLES 10' - 15' DIA
6" DIA. FOR MANHOLES LARGER THAN 15' DIA
4. HEIGHT OF STACK SHALL BE SET ABOVE THE 100 YR FLOOD ELEVATION PLUS 2 FEET.

CITY OF CUMMING
DEPARTMENT OF UTILITIES
VENTED MANHOLE

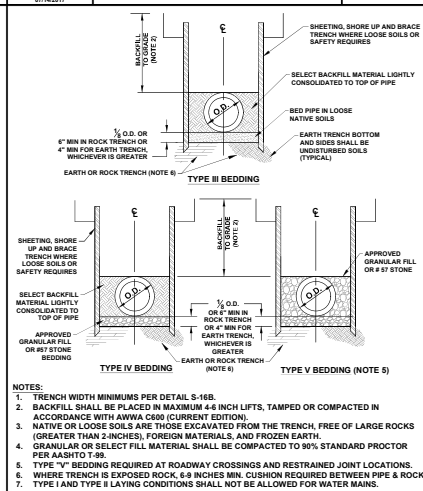
DETAIL NUMBER: **S-11**
SCALE: NOT TO SCALE
LATEST REVISION: 07/14/2017



NOTES:
1. TRENCH WIDTH MINIMUMS PER DETAIL S-16B.
2. BACKFILL SHALL BE PLACED IN MAXIMUM 4 INCH LIFTS, TAMPED OR COMPACTED IN ACCORDANCE WITH AWWA C909 (CURRENT EDITION).
3. NATIVE OR LOOSE SOILS ARE THOSE EXCAVATED FROM THE TRENCH, FREE OF LARGE ROCKS (GREATER THAN 2-INCHES), FOREIGN MATERIALS, AND FROZEN EARTH.
4. GRANULAR OR SELECT FILL MATERIAL SHALL BE COMPACTED TO 90% STANDARD PROCTOR PER AASHTO T-99.
5. TYPE "V" BEDDING REQUIRED AT ROADWAY CROSSINGS AND RESTRAINED JOINT LOCATIONS.
6. WHERE TRENCH IS EXPOSED ROCK, 6 INCHES MIN. CUSHION REQUIRED BETWEEN PIPE & ROCK.
7. TYPE I AND TYPE II LAYING CONDITIONS SHALL NOT BE ALLOWED FOR WATER MAINS.

CITY OF CUMMING
DEPARTMENT OF UTILITIES
MANHOLE FRAME AND ROTATING COVER NON-TRAFFIC RATED

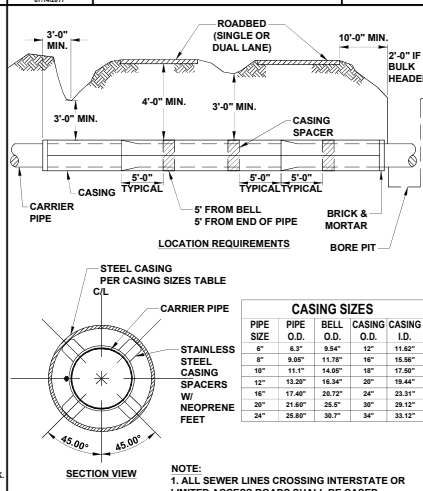
DETAIL NUMBER: **S-13**
SCALE: NOT TO SCALE
LATEST REVISION: 07/14/2017



NOTES:
1. TRENCH WIDTH MINIMUMS PER DETAIL S-16B.
2. BACKFILL SHALL BE PLACED IN MAXIMUM 4 INCH LIFTS, TAMPED OR COMPACTED IN ACCORDANCE WITH AWWA C909 (CURRENT EDITION).
3. NATIVE OR LOOSE SOILS ARE THOSE EXCAVATED FROM THE TRENCH, FREE OF LARGE ROCKS (GREATER THAN 2-INCHES), FOREIGN MATERIALS, AND FROZEN EARTH.
4. GRANULAR OR SELECT FILL MATERIAL SHALL BE COMPACTED TO 90% STANDARD PROCTOR PER AASHTO T-99.
5. TYPE "V" BEDDING REQUIRED AT ROADWAY CROSSINGS AND RESTRAINED JOINT LOCATIONS.
6. WHERE TRENCH IS EXPOSED ROCK, 6 INCHES MIN. CUSHION REQUIRED BETWEEN PIPE & ROCK.
7. TYPE I AND TYPE II LAYING CONDITIONS SHALL NOT BE ALLOWED FOR WATER MAINS.

CITY OF CUMMING
DEPARTMENT OF UTILITIES
BEDDING DETAIL

DETAIL NUMBER: **S-14**
SCALE: NOT TO SCALE
LATEST REVISION: 07/14/2017



NOTE:
1. ALL LOWER LINES CROSSING INTERSTATE OR LIMITED ACCESS ROADS SHALL BE CASED.

CITY OF CUMMING
DEPARTMENT OF UTILITIES
CASING DETAIL

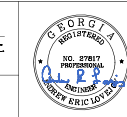
DETAIL NUMBER: **S-15**
SCALE: NOT TO SCALE
LATEST REVISION: 07/14/2017

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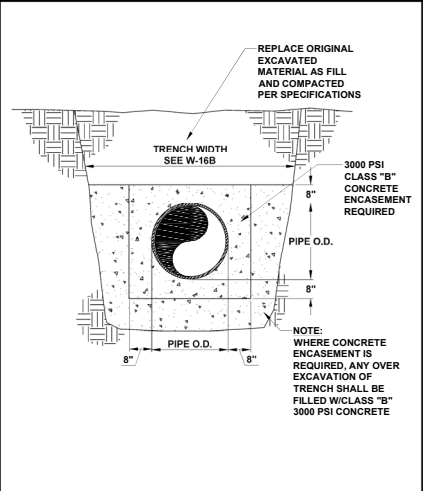
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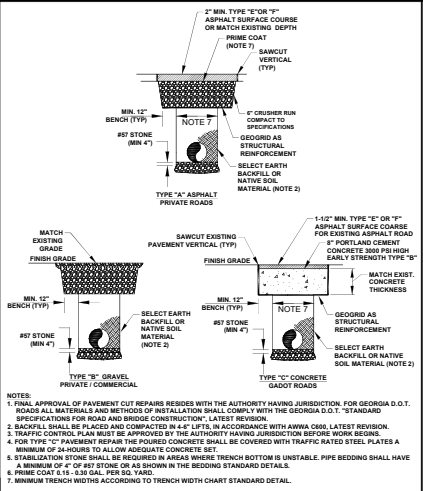


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			HAW CREEK ROAD OUTFALL AND FORCE MAIN	
			MISCELLANEOUS DETAILS 1	
10/16/19	BID READY		DATE: 10/09/2019	SHEET 20 OF 36
DATE	DESCRIPTION			



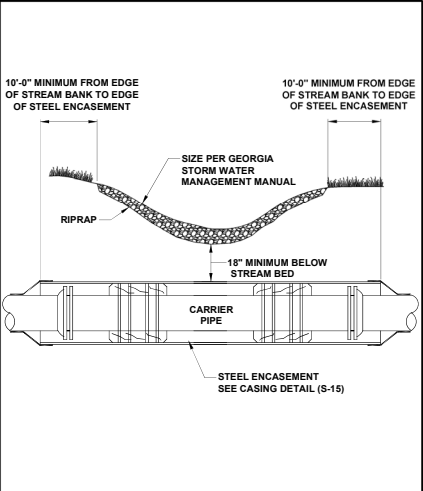
CITY OF CUMMING
DEPARTMENT OF UTILITIES
CONCRETE ENCASEMENT
DETAIL

DETAIL NUMBER: **S-16A**
SCALE: NOT TO SCALE



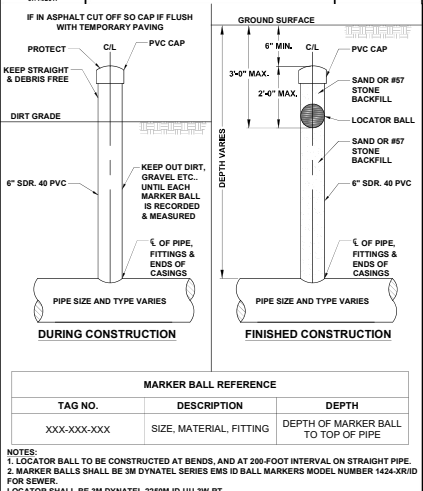
CITY OF CUMMING
DEPARTMENT OF UTILITIES
PAVEMENT CUT REPAIRS
TYPE "A", "B", & "C"

DETAIL NUMBER: **S-16B**
SCALE: NOT TO SCALE



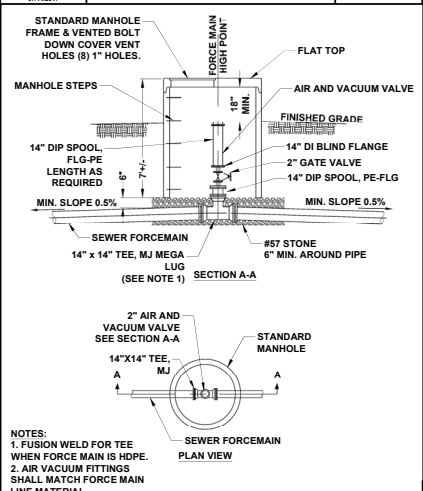
CITY OF CUMMING
DEPARTMENT OF UTILITIES
STREAM CROSSING

DETAIL NUMBER: **S-22**
SCALE: NOT TO SCALE



CITY OF CUMMING
DEPARTMENT OF UTILITIES
MARKER BALL DETAIL

DETAIL NUMBER: **S-27**
SCALE: NOT TO SCALE



CITY OF CUMMING
DEPARTMENT OF UTILITIES
AIR/VACUUM VALVE DETAIL

DETAIL NUMBER: **S-29**
SCALE: NOT TO SCALE

CITY OF CUMMING
DEPARTMENT OF UTILITIES
MEGALUG SPECIFICATIONS

DETAIL NUMBER: **S-31**
SCALE: NOT TO SCALE

Series 1100 Submittal Reference Drawing

3	1103	4.48	2.27	4.50	0.82	0.96	0.709	0.59	7.69	2	4	6.1	200
4	1104	5.80	2.27	4.50	0.75	0.90	0.675	0.50	9.12	2	4	7.7	200
6	1106	4.80	2.27	7.00	0.68	0.26	0.875	0.61	13.37	3	6	11.8	200
8	1108	10.72	2.31	9.02	0.50	0.44	0.875	0.71	13.37	4	6	14.8	200
10	1110	12.22	2.31	11.00	0.50	0.44	0.875	0.69	15.01	6	6	23.2	200
12	1112	16.32	2.31	13.50	0.50	0.44	0.875	0.62	17.08	8	6	31.2	200
14	1114	18.82	2.31	15.50	0.50	0.44	0.875	0.59	19.20	10	10	40.2	200
16	1116	18.50	2.31	17.50	0.50	0.44	0.875	0.56	21.30	12	12	54.4	200
18	1118	20.00	2.31	19.50	0.50	0.44	0.875	0.53	23.40	12	12	62.1	200
20	1120	22.70	2.31	21.49	0.50	0.44	0.875	0.50	25.50	14	14	73.0	200
24	1124	25.00	2.30	25.00	0.48	0.24	0.875	0.50	30.00	18	18	103.1	200
30	1130	23.25	2.30	23.25	0.48	0.24	0.875	0.50	36.00	20	20	116.0	200
36	1136	26.00	2.30	26.00	0.48	0.24	0.875	0.50	40.00	24	24	216.0	200
42	1142	27.74	2.30	27.74	0.48	0.24	0.875	0.50	48.00	28	28	265.0	200
48	1148	32.00	2.30	32.00	0.48	0.24	0.875	0.50	60.00	32	32	303.0	200
54	1154	34.80	2.30	34.80	0.48	0.24	0.875	0.50	66.00	36	36	390.0	200

Important Notes:

- The Series 1100 MEGALUG should be the used on pipe sizes 18" through 36" (Series 1100 MEGALUG components are provided with 30 inch lengths).
- Series 1100 MEGALUG should be used on pipe sizes 18" through 36" (Series 1100 MEGALUG components are provided with 30 inch lengths).
- Series 1100 MEGALUG should be used on pipe sizes 18" through 36" (Series 1100 MEGALUG components are provided with 30 inch lengths).

CITY OF CUMMING
DEPARTMENT OF UTILITIES
MAXIMUM SLOPE FOR GRAVITY SEWER LINES

DETAIL NUMBER: **S-31**
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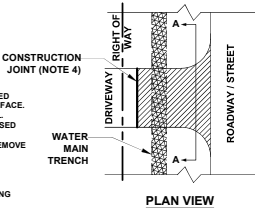
DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____

CITY OF CUMMING
HAWK CREEK ROAD OUTFALL AND FORCE MAIN

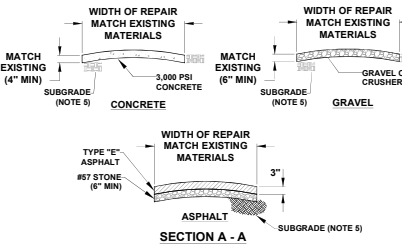
MISCELLANEOUS DETAILS 2

DATE: 10/09/2019 SHEET 21 OF 36

NOTES:
 1. FREE-BORE CROSSINGS ARE STANDARD UNLESS SHOWN OTHERWISE IN CONTRACT DRAWINGS OR APPROVAL IS GIVEN BY THE CITY.
 2. FINISHED GRADE TO BE FLUSH WITH EDGE OF DRIVE.
 3. FINISHED SURFACE OF REPAIRED AREA TO MATCH EXISTING SURFACE. SAW CUTS SHALL BE VERTICAL. EXPANSION MATERIAL TO BE USED AS DIRECTED.
 4. FOR CONCRETE DRIVEWAYS REMOVE & REPLACE BACK TO FIRST CONSTRUCTION JOINT.
 5. SUBGRADE COMPACTION AND MATERIALS SHALL MEET SPECIFICATIONS AND TRENCHING STANDARD DETAILS.

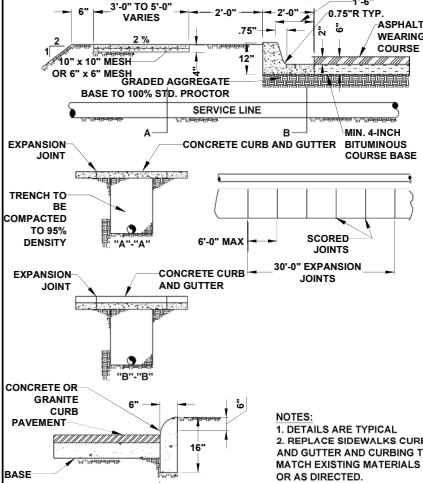


PLAN VIEW



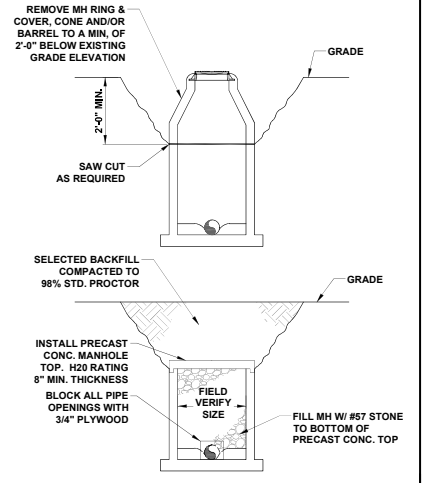
SECTION A - A

CITY OF CUMMING
 DEPARTMENT OF UTILITIES
DRIVEWAY CUT REPAIRS
 DETAIL NUMBER: **W-27**
 SCALE: NOT TO SCALE

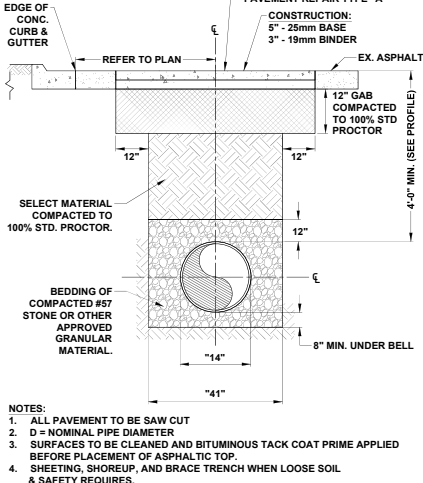


NOTES:
 1. DETAILS ARE TYPICAL
 2. REPLACE SIDEWALKS CURB AND GUTTER AND CURBS TO MATCH EXISTING MATERIALS OR AS DIRECTED.

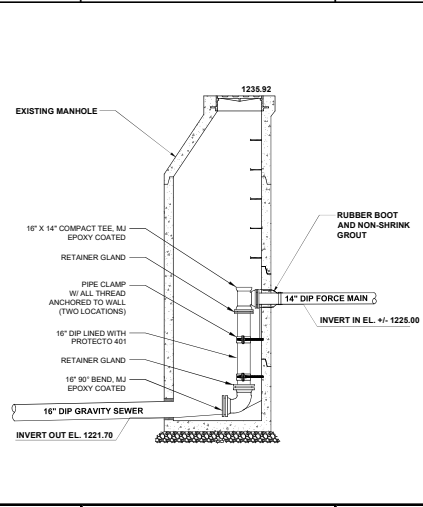
CITY OF CUMMING
 DEPARTMENT OF UTILITIES
SIDEWALK, CURB AND GUTTER REPAIRS
 DETAIL NUMBER: **W-28**
 SCALE: NOT TO SCALE



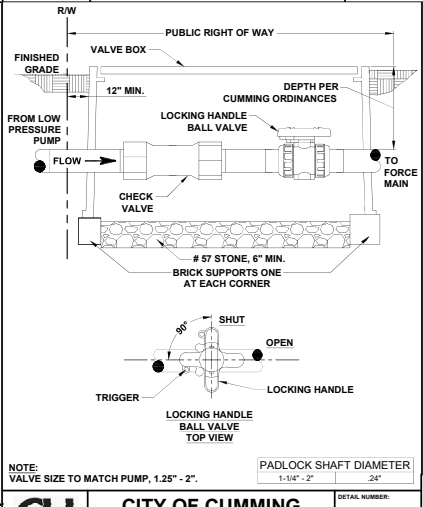
CITY OF CUMMING
 DEPARTMENT OF UTILITIES
MANHOLE ABANDONMENT
 DETAIL NUMBER: **NON-STANDARD DETAIL**
 SCALE: NOT TO SCALE



CITY OF CUMMING
 DEPARTMENT OF UTILITIES
TYPE V BEDDING & ASPHALT REPAIR/REPLACEMENT FOR HAW CREEK ROAD, HAW CREEK CIRCLE.
 DETAIL NUMBER: **NON-STANDARD DETAIL**
 SCALE: NOT TO SCALE



CITY OF CUMMING
 DEPARTMENT OF UTILITIES
FORCE MAIN CONNECTION DETAIL
 DETAIL NUMBER: **NON-STANDARD DETAIL**
 SCALE: NOT TO SCALE



CITY OF CUMMING
 DEPARTMENT OF UTILITIES
LOW PRESSURE CONNECTION
 DETAIL NUMBER: **S-24**
 SCALE: NOT TO SCALE

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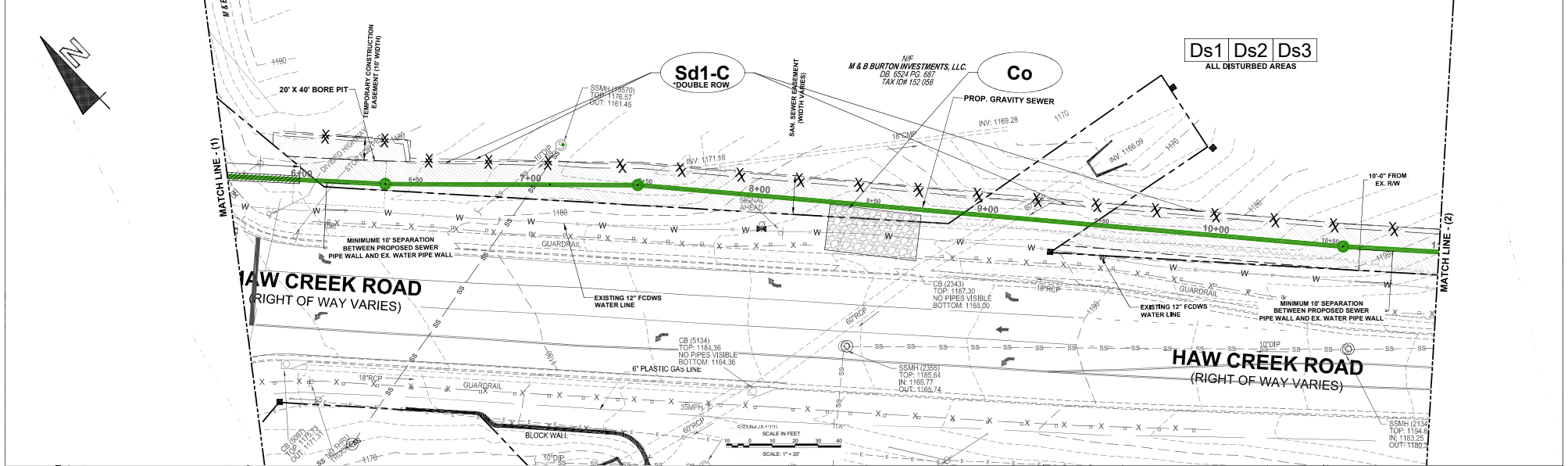
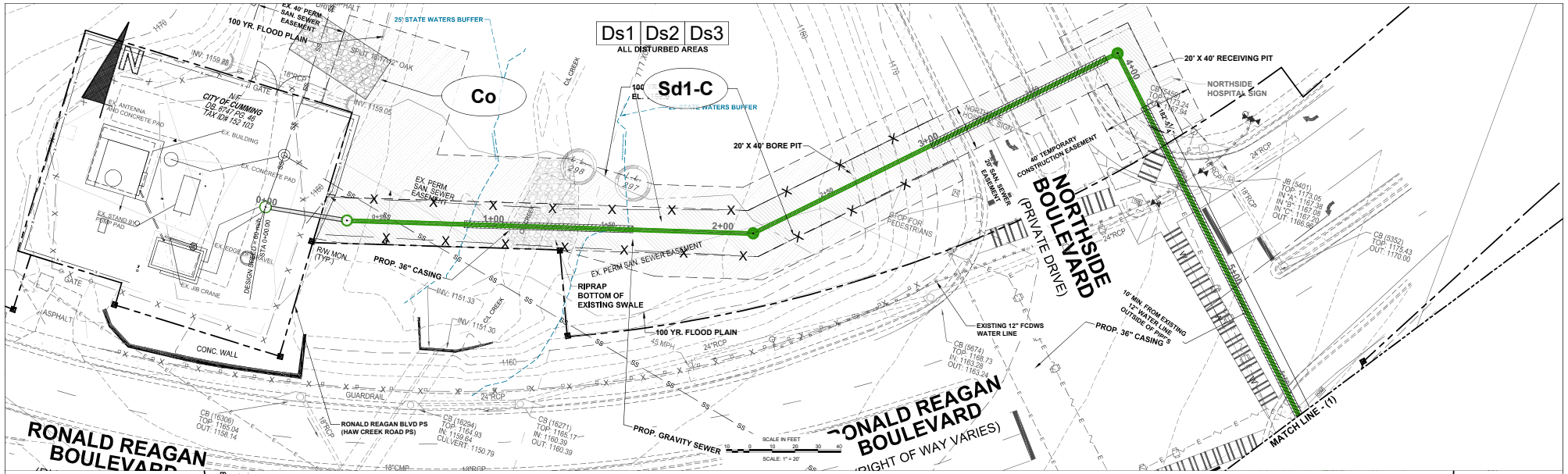
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			MISCELLANEOUS DETAILS 3	
10/16/19	BID READY		DATE: 10/09/2019	SHEET
	DESCRIPTION			22 OF 36



SCALE:
 1" = 20'-0" horiz.
 1" = 10'-0" vert.

SCALE IN FEET
 0 10 20 30 40

SCALE IN FEET
 0 10 20 30 40

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HAW CREEK ROAD OUTFALL AND FORCE MAIN
E&SCP PLANS - STA 0+00 - 11+00

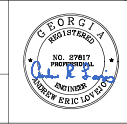
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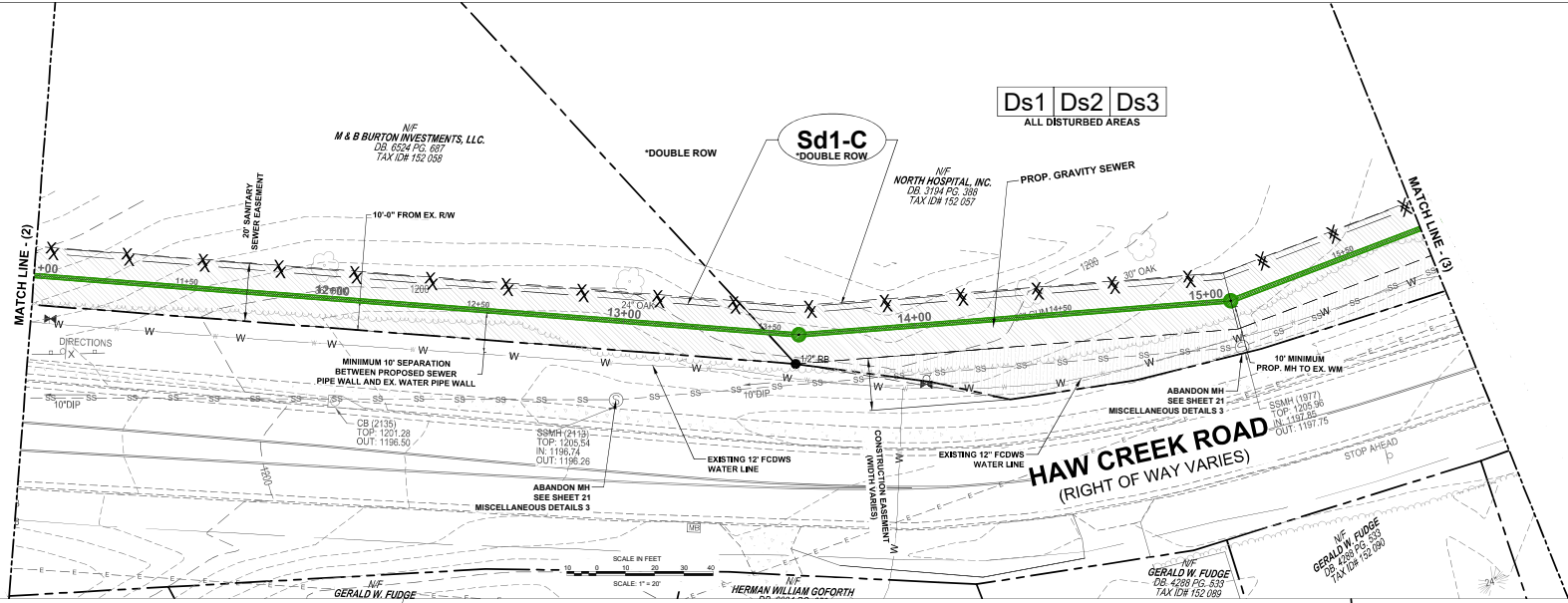


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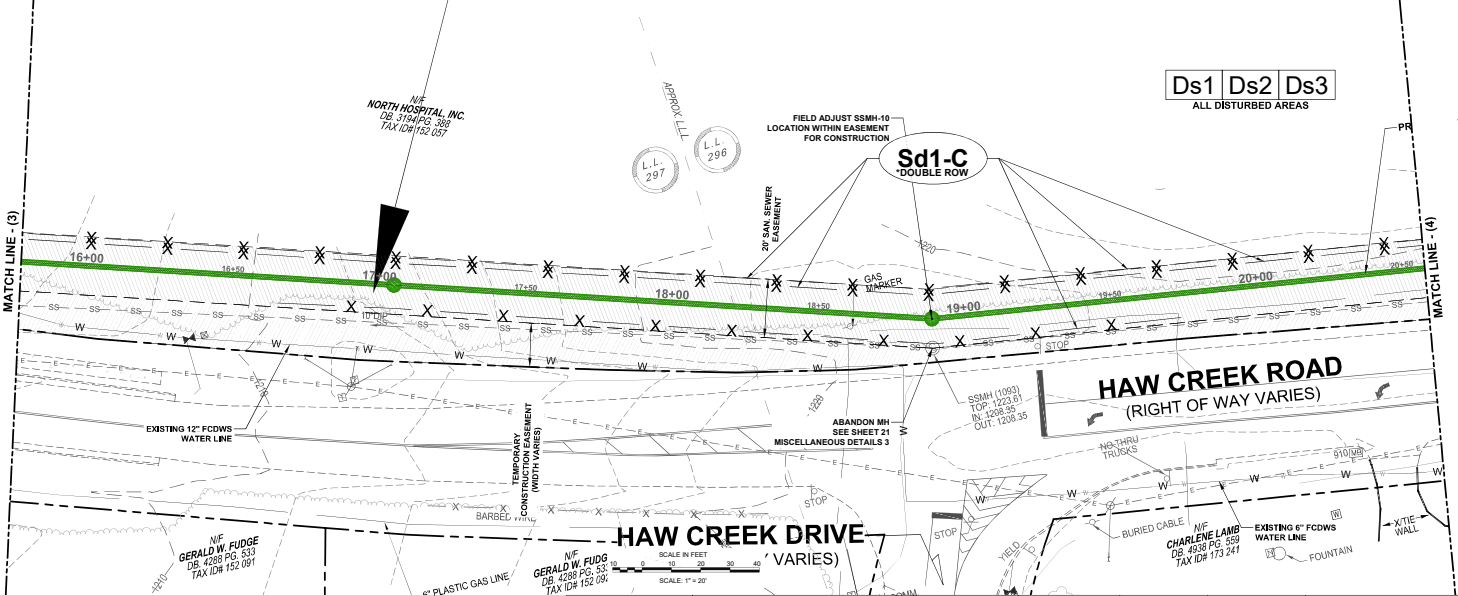
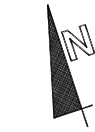
DATE	DESCRIPTION
10/16/19	BID READY

DATE	DESCRIPTION



Ds1 Ds2 Ds3
ALL DISTURBED AREAS

HAW CREEK ROAD
(RIGHT OF WAY VARIES)



Ds1 Ds2 Ds3
ALL DISTURBED AREAS

HAW CREEK ROAD
(RIGHT OF WAY VARIES)

HAW CREEK DRIVE
(VARIES)

SCALE:
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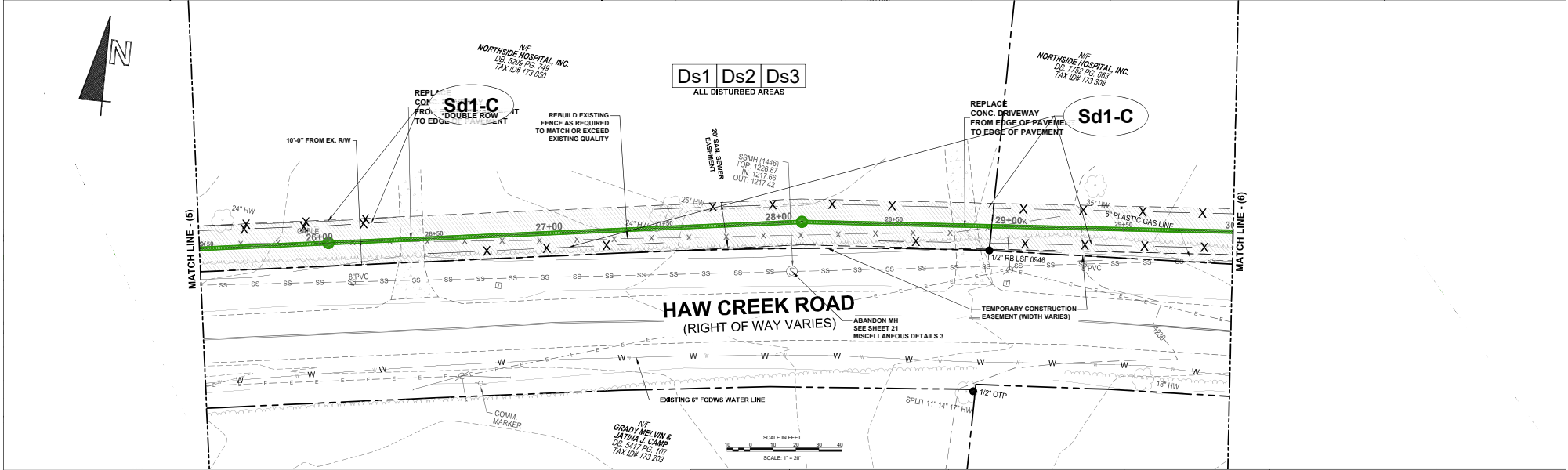
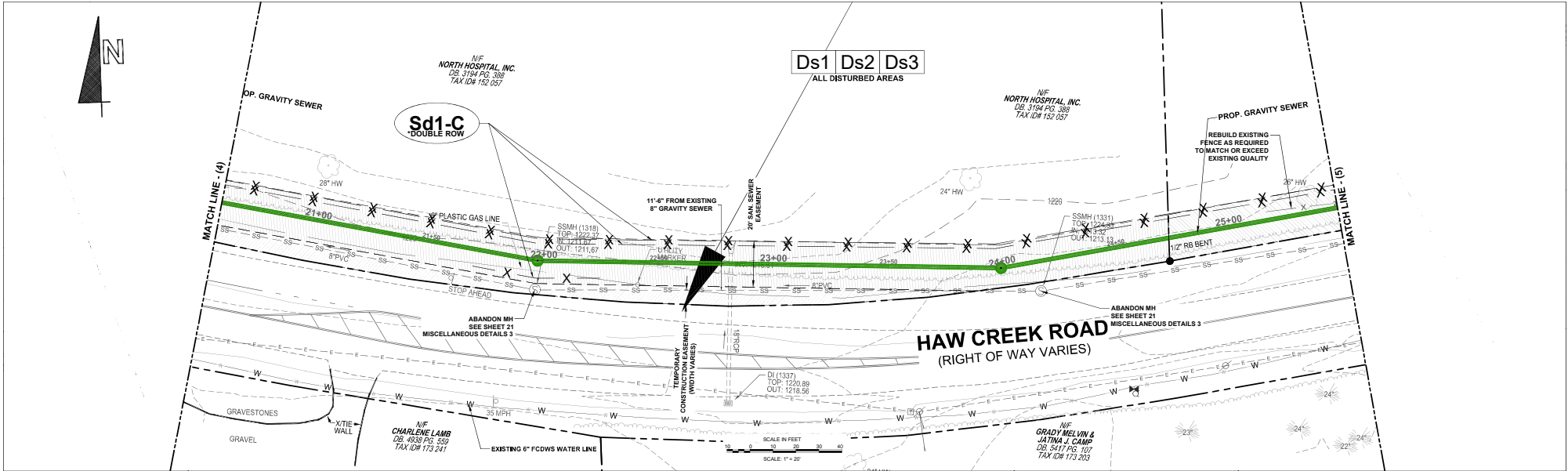
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DATE	DESCRIPTION	DATE:	SHEET
10/16/19	BID READY	10/09/2019	25 OF 36

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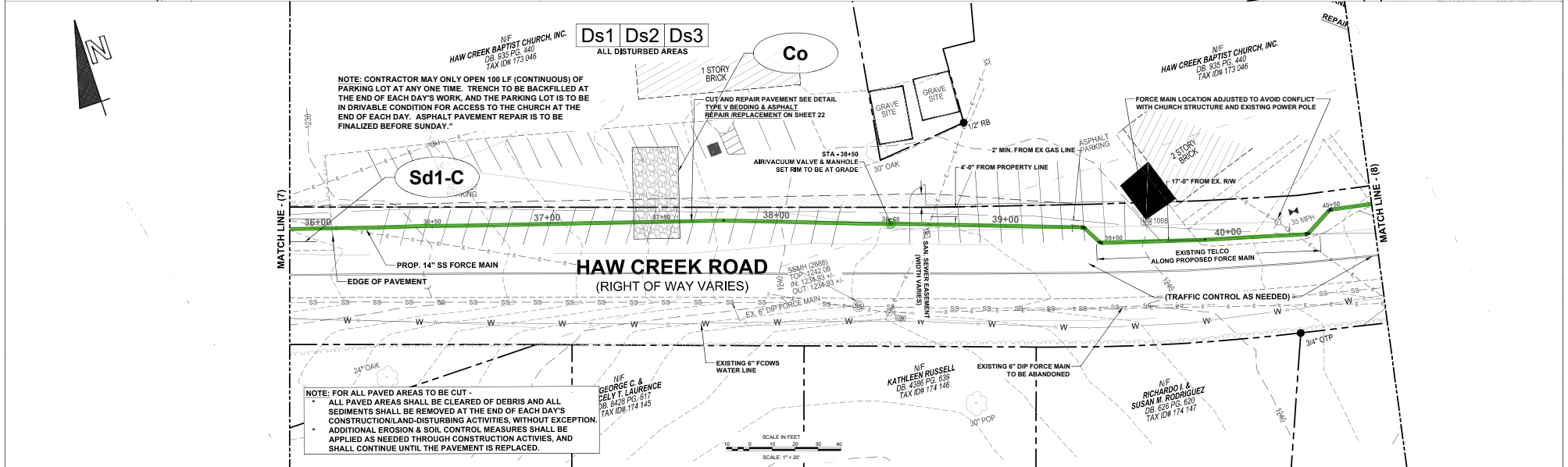
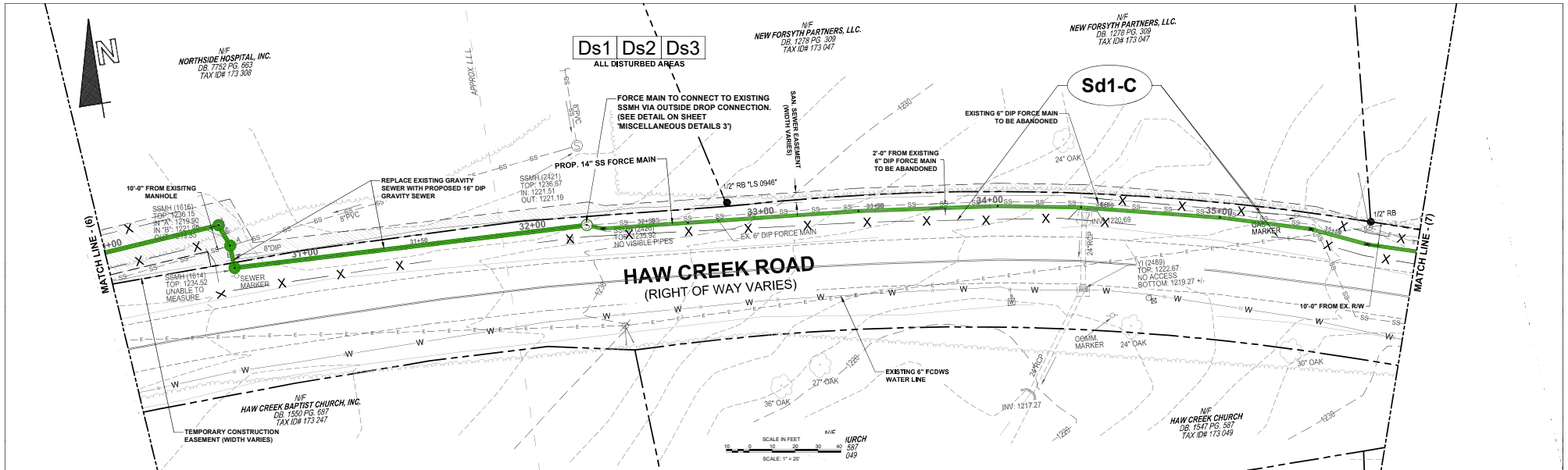


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HAW CREEK ROAD OUTFALL AND FORCE MAIN	
E&SCP PLANS - STA 20+60 - 30+00	
DATE: 10/09/2019	SHEET 26 OF 36



NOTE: CONTRACTOR MAY ONLY OPEN 100 LF (CONTINUOUS) OF PARKING LOT AT ANY ONE TIME. TRENCH TO BE BACKFILLED AT THE END OF EACH DAY'S WORK, AND THE PARKING LOT IS TO BE IN DRIVABLE CONDITION FOR ACCESS TO THE CHURCH AT THE END OF EACH DAY. ASPHALT PAVEMENT REPAIR IS TO BE FINALIZED BEFORE SUNDAY.

NOTE: FOR ALL PAVED AREAS TO BE CUT - ALL PAVED AREAS SHALL BE CLEARED OF DEBRIS AND ALL SEDIMENTS SHALL BE REMOVED AT THE END OF EACH DAY'S CONSTRUCTION/LAND-DISTURBING ACTIVITIES, WITHOUT EXCEPTION. ADDITIONAL EROSION & SOIL CONTROL MEASURES SHALL BE APPLIED AS NEEDED THROUGH CONSTRUCTION ACTIVITIES, AND SHALL CONTINUE UNTIL THE PAVEMENT IS REPLACED.

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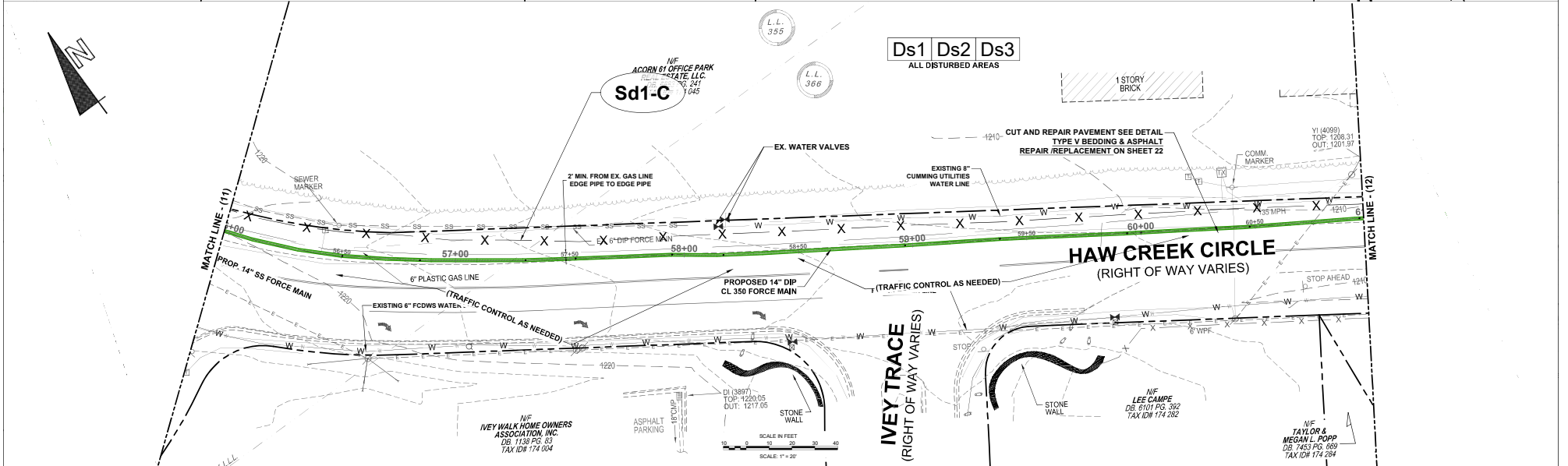
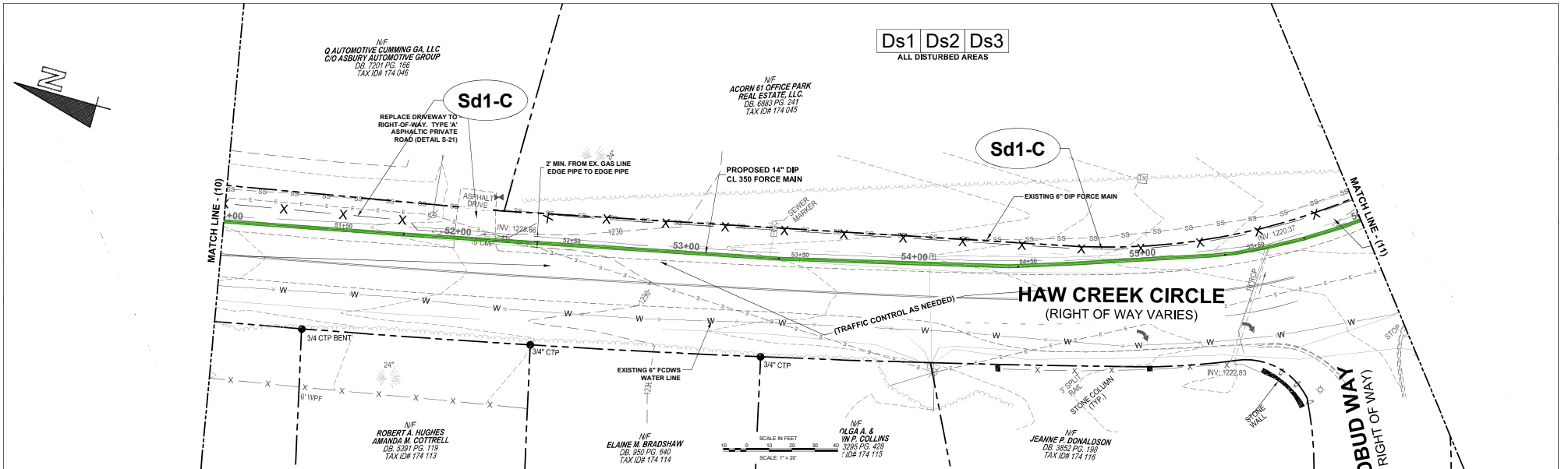


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HAW CREEK ROAD OUTFALL AND FORCE MAIN	
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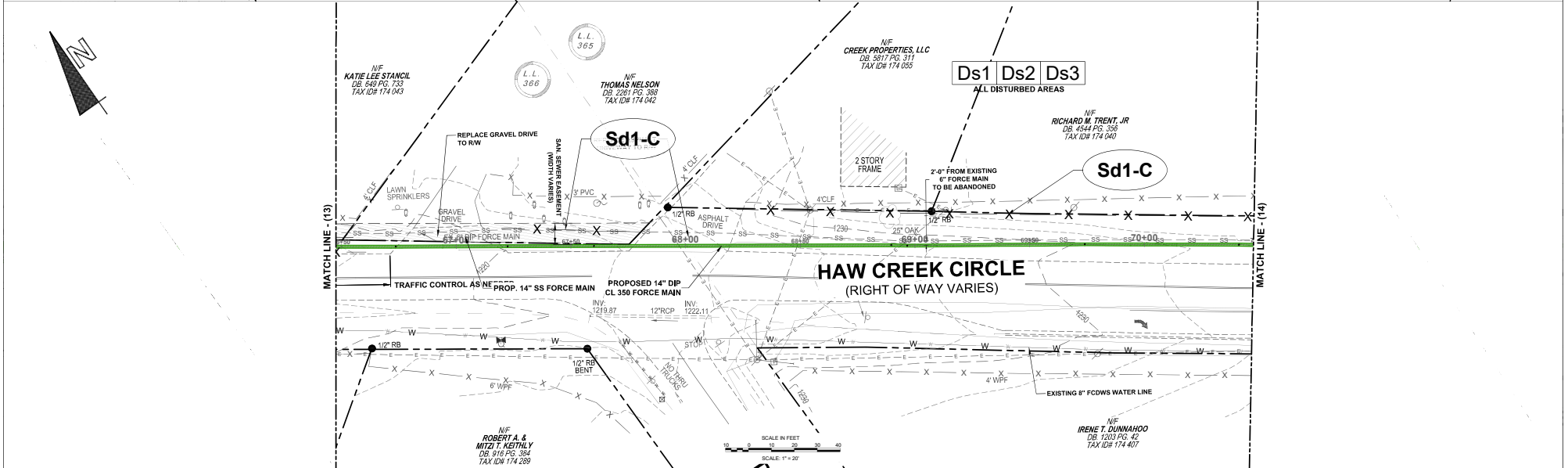
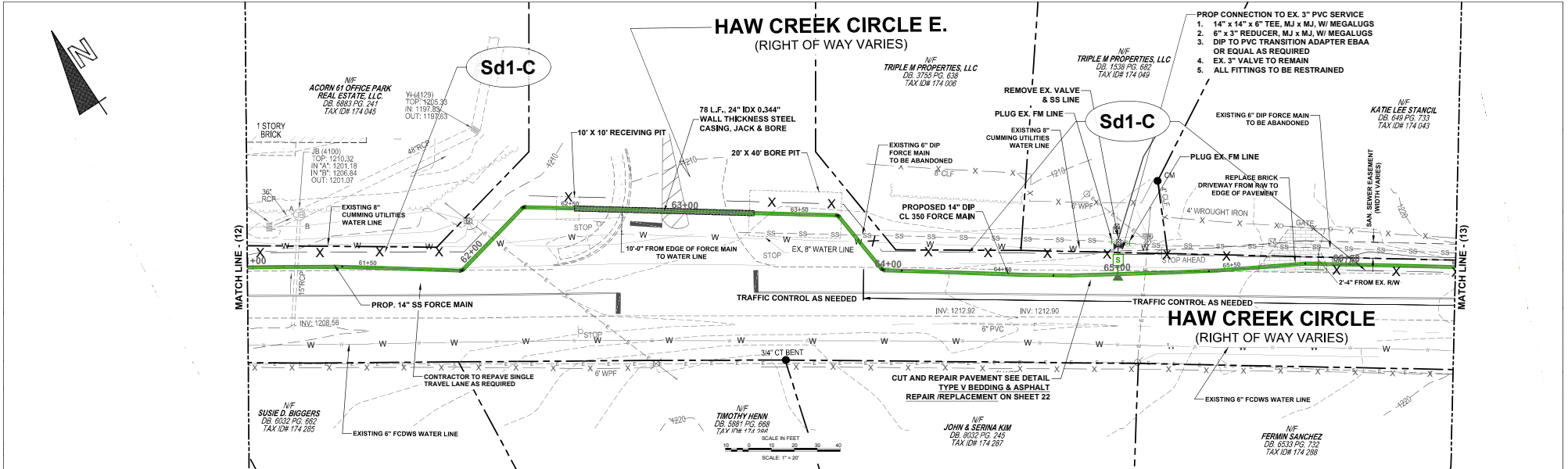
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E&SCP PLANS - STA 61+00 - 70+50	
DATE: 10/09/2019	SHEET 30 OF 36

EROSION CONTROL NOTES:

- EROSION CONTROL PRACTICES MUST COMPLY WITH THE MINIMUM BEST MANAGEMENT PRACTICES FOR EROSION CONTROL. AND SHALL COMPLY WITH THE STANDARDS SPECIFICATIONS IN THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA.
- IN CONCENTRATED FLOW AREAS, ALL SLOPES STEEPER THAN 2.5:1 AND WITH A HEIGHT TEN FEET OR GREATER, AND CUTS AND FILLS WITHIN STREAM BUFFERS, SHALL BE STABILIZED WITH THE APPROPRIATE EROSION CONTROL MATTING OR BLANKET.
- MULCH TEMPORARY VEGETATION ON ALL EXPOSED AREAS WITHIN 7 DAYS AFTER DISTURBANCE
- DISTURBED AREAS LEFT IDLE FOR 5 DAYS, AND NOT TO FINAL GRADE, WILL BE ESTABLISHED TO TEMPORARY VEGETATION (D2s). ALL AREAS TO FINAL GRADE WILL BE ESTABLISHED TO PERMANENT VEGETATION (D3s) IMMEDIATELY UPON COMPLETION.
- WHEN PLANTING VEGETATION, MULCH (HAY OR STRAW) SHOULD BE UNIFORMLY SPREAD OVER SEEDS AREA WITHIN 24 HOURS OF SEEDING.
- FORSYTH COUNTY LAND DISTURBANCE PERMIT MUST BE DISPLAYED ON SITE AT ALL TIMES DURING CONSTRUCTION AND IN PLAN VIEW FROM A COUNTY ROAD OR STREET.
- EROSION AND SEDIMENT CONTROL DEVICES MUST BE INSTALLED AND INSPECTED PRIOR TO ANY GRADING ON SITE. PLEASE CALL (770) 528-2134 WITH ENOUGH LEAD-TIME FOR AN INSPECTION TO MEET SCHEDULE.
- SEDIMENT/EROSION CONTROL DEVICES MUST BE CHECKED AFTER EACH STORM EVENT. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED ONE HALF THE CAPACITY OF THE DEVICE. ADDITIONAL DEVICES MUST BE INSTALLED IF NEW CHANNELS HAVE DEVELOPED.
- THE USE OF POLYMERS (PAMS) IS ACCEPTED AS A BMP AS RECOMMENDED BY THE STATE SOIL & WATER CONSERVATION COMMISSION BMP "GREEN BOOK". THE POLYMERS USED TO STABILIZE CONSTRUCTION SITES MUST BE USED IN CONFORMANCE WITH MULCHING AND/OR HYDRO SEEDING.
- IF STREAMS ARE ON THE SITE, THE STREAM BUFFERS SHALL BE LEFT UNDISTURBED AND A CONSERVATION EASEMENT OR A RESTRICTIVE COVENANT BE PLACED ON THAT PROPERTY.
- THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND DISTURBING ACTIVITIES.
- EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.
- ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.
- AMENDMENTS/REVISIONS TO THE E&SCP PLAN WHICH HAVE A SIGNIFICANT EFFECT ON BMP'S WITH A HYDRAULIC COMPONENT MUST BE CERTIFIED BY A DESIGN PROFESSIONAL.
- NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50-FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION.

INSPECTIONS

PRIMARY PERMITTEE

- EACH DAY WHEN ANY TYPE OF CONSTRUCTION ACTIVITY HAS TAKEN PLACE AT A PRIMARY PERMITTEE'S SITE QUALIFIED PERSONNEL PROVIDED BY THE PRIMARY PERMITTEE SHALL INSPECT (a) ALL AREAS AT THE PRIMARY PERMITTEE'S SITE WHERE PETROLEUM PRODUCTS ARE STORED, USED OR HANDLED FOR SPILLS AND LEAKS FROM VEHICLES AND EQUIPMENT, (b) ALL LOCATIONS AT THE PRIMARY PERMITTEE'S SITE WHERE VEHICLES ENTER OR EXIT THE SITE FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING AND (c) MEASURE RAINFALL ONCE EACH TWENTY-FOUR HOUR PERIOD AT THE SITE. THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED.
- MEASURE RAINFALL ONCE EVERY 24 HOURS EXCEPT ANY NON-WORKING SATURDAY, NON-WORKING SUNDAY AND NON-WORKING FEDERAL HOLIDAY UNTIL A NOTICE OF TERMINATION IS SUBMITTED. MEASUREMENT OF RAINFALL MAY BE SUSPENDED IF ALL AREAS OF THE SITE HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION.
- QUALIFIED PERSONNEL (PROVIDED BY THE PRIMARY PERMITTEE) SHALL INSPECT AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.5 INCHES OR GREATER THE FOLLOWING: (a) DISTURBED AREAS OF THE PRIMARY PERMITTEE'S CONSTRUCTION SITE THAT HAVE NOT UNDERGONE FINAL STABILIZATION, (b) AREAS USED BY THE PRIMARY PERMITTEE FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION THAT HAVE NOT UNDERGONE FINAL STABILIZATION AND (c) STRUCTURAL CONTROL MEASURES. EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN APPLICABLE TO THE PRIMARY PERMITTEE'S SITE SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATERS. FOR AREAS OF A SITE THAT HAVE UNDERGONE FINAL STABILIZATION, THE PERMITTEE MUST COMPLY WITH PART IV D.3.a.3). THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED.
- QUALIFIED PERSONNEL (PROVIDED BY THE PRIMARY PERMITTEE) SHALL INSPECT AT LEAST ONCE PER MONTH DURING THE TERM OF THIS PERMIT (I.E. UNTIL A NOTICE OF TERMINATION IS RECEIVED BY EPO). THE AREAS OF THE SITE THAT HAVE UNDERGONE FINAL STABILIZATION, THESE AREAS SHALL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING AND/OR RECEIVING WATERS. EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATERS).
- BASED ON THE RESULTS OF EACH INSPECTION, THE SITE DESCRIPTION AND THE POLLUTION PREVENTION AND CONTROL MEASURES IDENTIFIED IN THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN, THE PLAN SHALL BE REVISED AS APPROPRIATE NOT LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION. IMPLEMENTATION OF SUCH CHANGES SHALL BE MADE AS SOON AS PRACTICAL BUT IN NO CASE LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION.
- A REPORT SUMMARIZING THE SCORE OF EACH INSPECTION AND THE NAME(S) OF PERSONNEL MAKING EACH INSPECTION, THE DATE(S) OF EACH INSPECTION, MAKE OR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN AND ACTIONS TAKEN IN ACCORDANCE WITH PART IV D.3.a.(4) OF THE PERMIT SHALL BE MADE DAILY OR BE READILY AVAILABLE AT A DESIGNATED LOCATION AT THE LOCATION UNTIL THE ENTIRE SITE OR THAT PORTION OF A CONSTRUCTION PROJECT THAT HAS BEEN PHASED HAS UNDERGONE FINAL STABILIZATION AND A NOTICE OF TERMINATION IS SUBMITTED TO EPO. SUCH REPORTS SHALL IDENTIFY ANY INCIDENTS OF NON-COMPLIANCE, WHERE THE REPORT DOES NOT IDENTIFY ANY INCIDENTS OF NON-COMPLIANCE, THE REPORT SHALL CONTAIN A CERTIFICATION THAT THE FACILITY IS IN COMPLIANCE WITH THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN AND THIS PERMIT. THE REPORT SHALL BE SIGNED IN ACCORDANCE WITH PART V.G. OF THIS PERMIT.

NO WASTE MATERIALS WILL BE DISPOSED OF INTO STORM WATER INLETS OR WATERS OF THE STATE.

WASTE MATERIALS

ALL WASTE MATERIALS WILL BE COLLECTED AND STORED IN A SECURELY LIDDED METAL DUMPSTER. THE DUMPSTER WILL MEET ALL SOLID WASTE MANAGEMENT REGULATIONS. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE WILL BE DEPOSITED IN THE DUMPSTER. THE DUMPSTER WILL BE EMPTIED AS REQUIRED BY LOCAL REGULATIONS. IF MORE NECESSARY AND TRASH WILL BE HAULED AS REQUIRED BY LOCAL REGULATIONS. NO CONSTRUCTION WASTE WILL BE BURIED ON SITE.

ALL PERSONNEL WILL BE INSTRUCTED ON PROPER PROCEDURES FOR WASTE DISPOSAL. A NOTICE STATING THESE PRACTICES WILL BE POSTED AT THE JOB SITE AND THE CONTRACTOR WILL BE RESPONSIBLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED.

HAZARDOUS WASTES

ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL, STATE AND/OR FEDERAL REGULATIONS AND BY THE MANUFACTURER OF SUCH PRODUCTS. THE JOB SITE SUPERINTENDENT WHO WILL ALSO BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED, WILL INSTRUCT SITE PERSONNEL IN THESE PRACTICES. MATERIAL SAFETY DATA SHEETS (MSDS)'S FOR EACH SUBSTANCE WITH HAZARDOUS PROPERTIES THAT IS USED ON THE JOB SITE WILL BE OBTAINED AND USED FOR THE PROPER MANAGEMENT OF POTENTIAL WASTES THAT MAY RESULT FROM THESE PRODUCTS. AN MSDS WILL BE POSTED IN THE IMMEDIATE AREA WHERE SUCH PRODUCT IS STORED AND/OR USED AND ANOTHER COPY OF EACH MSDS WILL BE MAINTAINED IN THE E&SCP FILE AT THE JOB SITE CONSTRUCTION TRAILER OFFICE. EACH EMPLOYER WHO MUST HANDLE A SUBSTANCE WITH HAZARDOUS PROPERTIES WILL BE INSTRUCTED ON THE USE OF MSDS SHEETS AND THE SPECIFIC INFORMATION IN THE APPLICABLE MSDS FOR THE PRODUCT HE/SHE IS USING, PARTICULARLY REGARDING SPILL CONTROL TECHNIQUES.

THE CONTRACTOR WILL IMPLEMENT THE SPILL PREVENTION AND COUNTERMEASURES (SPCC) PLAN FOUND WITHIN THIS E&SCP AND WILL TRAIN ALL PERSONNEL IN THE PROPER CLEANUP AND HANDLING OF SPILLED MATERIALS. NO SPILLED HAZARDOUS MATERIALS OR HAZARDOUS WASTES WILL BE ALLOWED TO COME IN CONTACT WITH STORM WATER DISCHARGES. IF SUCH CONTACT OCCURS, THE STORM WATER DISCHARGE WILL BE CONTAINED ON SITE UNTIL APPROPRIATE MEASURES IN COMPLIANCE WITH STATE AND FEDERAL REGULATIONS ARE TAKEN TO DISPOSE OF SUCH CONTAMINATED STORM WATER. THE CONTRACTOR WILL BE RESPONSIBLE OF THE JOB SITE SUPERINTENDENT TO PROPERLY TRAIN ALL PERSONNEL IN THE USE OF THE SPCC PLAN.

SANITARY WASTES

A MINIMUM OF ONE PORTABLE SANITARY UNIT WILL BE PROVIDED FOR EVERY TEN (10) WORKERS ON THE SITE. ALL SANITARY WASTE WILL BE COLLECTED IN PORTABLE SANITARY UNITS A MINIMUM OF ONE TIME PER WEEK BY A LICENSED PORTABLE FACILITY PROVIDER IN COMPLETE COMPLIANCE WITH LOCAL AND STATE REGULATIONS. ALL SANITARY WASTE UNITS WILL BE LOCATED IN AN AREA WHERE THE LIKELIHOOD OF THE UNIT CONTRIBUTING TO STORM WATER DISCHARGE IS NEGLIGIBLE. ADDITIONAL CONTAINMENT BMP'S MUST BE IMPLEMENTED, SUCH AS GRAVEL BAGS OR SPECIALLY DESIGNED PLASTIC SKID CONTAINERS AROUND THE BASE, TO PREVENT WASTES FROM CONTRIBUTING TO STORM WATER DISCHARGES. THE LOCATION OF SANITARY WASTE UNITS MUST BE IDENTIFIED ON THE EROSION CONTROL PLANS, SHEET 4, BY THE CONTRACTOR ONCE THE LOCATIONS HAVE BEEN DETERMINED.

SPILL CLEANUP AND CONTROL POLICIES

- LOCAL, STATE AND MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND PROCEDURES WILL BE MADE AVAILABLE TO SITE PERSONNEL.
- MATERIAL AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREAS. TYPICAL MATERIALS AND EQUIPMENT INCLUDES, BUT IS NOT LIMITED TO, BROOMS, DUSTPANS, MOPS, RAGS, GLOVES, GOGGLES, CAT LITTER, SAND, SAWDUST AND PROPERLY LABELED PLASTIC AND METAL WASTE CONTAINERS.
- SPILL PREVENTION PRACTICES AND PROCEDURES WILL BE REVIEWED AFTER A SPILL AND ADJUSTED AS NECESSARY TO PREVENT FUTURE SPILLS.
- ALL SPILLS WILL BE CLEANED UP IMMEDIATELY UPON DISCOVERY. ALL SPILLS WILL BE REPORTED AS REQUIRED BY LOCAL, STATE AND FEDERAL REGULATIONS.
- FOR SPILLS THAT IMPACT SURFACE WATER (LEAVE A SHEEN ON SURFACE WATER), THE NATIONAL RESPONSE CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1-800-426-2675.
- FOR SPILLS OF AN UNKNOWN AMOUNT, THE NATIONAL RESPONSE CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1-800-426-2675.
- FOR SPILLS LESS THAN 25 GALLONS AND NO SURFACE WATER IMPACTS, THE SPILL WILL BE CLEANED UP AND LOCAL AGENCIES WILL BE CONTACTED AS REQUIRED.

THE CONTRACTOR SHALL NOTIFY THE LICENSED PROFESSIONAL WHO PREPARED THIS PLAN IF MORE THAN 1200 GALLONS OF PETROLEUM IS STORED ON SITE (THIS INCLUDES CAPACITIES OF EQUIPMENT OR IF ANY ONE CONTAINER HAS EXCEEDED MORE THAN 600 GALLONS. THE CONTRACTOR WILL NEED A SPILL PREVENTION CONTAINMENT AND COUNTERMEASURES PLAN PREPARED BY THAT LICENSED PROFESSIONAL.

OFFSITE VEHICLE TRACKING

A STABILIZED CONSTRUCTION EXIT HAS BEEN PROVIDED TO HELP REDUCE VEHICLE TRACKING OF SEDIMENT. THE PAVED STREET ADJACENT TO THE SITE EXIT WILL BE INSPECTED DAILY FOR TRACKING OF MUD, DIRT OR ROCK.

STREAM BUFFERS

NON-EXEMPT ACTIVITIES DOES NOT PROPOSED TO ENCRACH INTO 25' STATE STREAM BUFFERS.

POST-CONSTRUCTION STORM WATER POLLUTANT CONTROL

IN ORDER TO CONTROL POLLUTANTS IN STORM WATER THAT WILL OCCUR AFTER CONSTRUCTION OPERATIONS HAVE BEEN COMPLETED THE FOLLOWING MEASURES SHALL BE INSTALLED:

- PERMANENT GRASSING IN ALL DISTURBED AREAS SHALL BE ACCEPTABLE AS DETERMINED BY THE ENGINEER AND DEFINED AS COVERING 96% OF THE AREA TO BE GRASSSED WITH NO BARE AREA GREATER THAN ONE SQUARE FOOT AND THE ENTIRE AREA FULLY STABILIZED AGAINST EROSION.

DESIGN PROFESSIONAL 7-DAY VISIT CERTIFICATION

DATE OF INSPECTION: _____

I CERTIFY THE SITE WAS IN COMPLIANCE WITH E&SCP PLAN ON THE DATE OF INSPECTION.

GSWCC LEVEL / DESIGN PROFESSIONAL CERTIFICATION # _____

INSPECTION REVEALED THE FOLLOWING DISCREPANCIES FROM THE E&SCP PLAN:

_____ THESE DISCREPANCIES MUST BE ADDRESSED IMMEDIATELY AND A RE-INSPECTION SCHEDULED. WORK SHALL NOT PROCEED ON THE SITE UNTIL DESIGN PROFESSIONAL CERTIFICATION IS OBTAINED.

CERTIFICATION

- I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION AND POLLUTION CONTROL (E&SCP) PLAN PROVIDES FOR AN APPROPRIATE AND COMPREHENSIVE SYSTEM OF BEST MANAGEMENT PRACTICES REQUIRED BY THE GEORGIA WATER QUALITY ACT AND THE DOCUMENT "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA," PUBLISHED BY THE STATE SOIL AND WATER CONSERVATION COMMISSION AS OF JANUARY 1 OF THE YEAR IN WHICH THE LAND-DISTURBING ACTIVITY WAS PERMITTED, PROVIDES FOR THE SAMPLING OF THE RECEIVING WATERS OR THE SAMPLING OF THE STORM WATER OUTFALLS AND THAT THE DESIGNED SYSTEM OF BEST MANAGEMENT PRACTICES IS EXPECTED TO MEET THE DESIGN REQUIREMENTS CONTAINED IN THE GENERAL NPDES PERMIT NOS. GAR 1000001, GAR 1000002 AND GAR 1000003.
- I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY DIRECT SUPERVISION.
- I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED, BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION. THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.
- THE PROPOSED EROSION AND RUNOFF CONTROL MEASURES ARE IN COMPLIANCE WITH THE FORSYTH COUNTY SEDIMENT CONTROL AND FLOOD PROTECTION REGULATIONS AND WILL NOT INCREASE THE RUNOFF RATE FROM THE SITE FOR RAINSTORMS WITH A RETURN PERIOD OF 2, 5, 10, 25, 50 AND/OR 100 YEARS.

Ling Wang
NAME

03/26/2019

DATE

AMENDMENTS

ANY AMENDMENT TO THE EROSION CONTROL PLANS WHICH HAVE A SIGNIFICANT EFFECT ON BMP'S WITH A HYDRAULIC COMPONENT MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL.

RETENTION OF RECORDS

- EACH PRIMARY PERMITTEE SHALL RETAIN A COPY OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN AT THE CONSTRUCTION SITE OR THE PLAN SHALL BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION FROM THE DATE OF PROJECT INITIATION TO THE DATE OF FINAL STABILIZATION. PRIMARY PERMITTEES SHOULD POST COPIES OF THE NOI, EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN, SAMPLING RESULTS, INSPECTION REPORTS, ETC. ON OR IN A PERMIT BOARD AT THE BEGINNING OF EACH PHASE TO FACILITATE INSPECTIONS BY EPO.
- COPIES OF ALL NOTICES OF INTENT, NOTICES OF TERMINATION, REPORTS, PLANS, MONITORING RECORDS, MONITORING INFORMATION, INCLUDING ALL CALIBRATION AND MAINTENANCE RECORDS AND ALL ORIGINAL STRIP CHART RECORDINGS FOR CONTINUOUS MONITORING INSTRUMENTATION, EROSION, SEDIMENTATION AND POLLUTION CONTROL PLANS, RECORDS OF ALL DATA USED TO COMPLETE THE NOTICE OF INTENT AND ALL OTHER REQUIRED RECORDS SHALL BE RETAINED BY THE PERMITTEE FOR A PERIOD OF THREE YEARS FROM THE DATE THAT THE SITE IS FINALLY STABILIZED. THESE RECORDS MUST BE MAINTAINED AT THE PERMITTEE'S PRIMARY PLACE OF BUSINESS ONCE THE CONSTRUCTION ACTIVITY HAS CEASED AT THE PERMITTED SITE. THIS PERIOD MAY BE EXTENDED BY THE REQUEST OF THE EPO AT ANY TIME UPON WRITTEN NOTIFICATION TO THE PERMITTEE.

PRODUCT SPECIFIC PRACTICES

PETROLEUM BASED PRODUCTS - CONTAINERS FOR PRODUCTS SUCH AS FUELS, LUBRICANTS AND TARS WILL BE INSPECTED DAILY FOR LEAKS AND SPILLS. THIS INCLUDES ON-SITE VEHICLES AND MACHINERY DAILY INSPECTIONS AND REGULAR PREVENTATIVE MAINTENANCE OF SUCH EQUIPMENT. EQUIPMENT MAINTENANCE AREAS WILL BE LOCATED AWAY FROM STORM WATER, NATURAL DRAINS AND STORM WATER DRAINING INLETS. IN ADDITION, TEMPORARY FUELING TANKS SHALL HAVE A SECONDARY CONTAINMENT LINER TO PREVENT MINIMIZE SITE CONTAMINATION. DISCHARGE OF OILS, FUELS AND LUBRICANTS IS PROHIBITED. PROPER DISPOSAL METHODS INCLUDE THE COLLECTION IN A SUITABLE CONTAINER AND DISPOSAL AS REQUIRED BY LOCAL AND STATE REQUIREMENTS.

PAINTS/FINISHES/SOLVENTS - ALL PRODUCTS WILL BE STORED IN TIGHTLY SEALED ORIGINAL CONTAINERS WHEN NOT IN USE. EXCESS PRODUCT WILL NOT BE DISCHARGED TO THE STORM WATER COLLECTION SYSTEM. EXCESS PRODUCT MATERIALS USED WITH THESE PRODUCTS AND PRODUCT CONTAINERS WILL BE DISPOSED OF ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.

CONCRETE TRUCK WASHING - PROVIDE WASHDOWN CONTAINMENT FOR THE WASH-DOWN WATER FROM CONCRETE MIXER CHUTES, HOPPERS, AND OTHER TOOLS AND EQUIPMENT. PREVENT ANY WATER THAT CONTACTS UNCURED OR PARTLY CURED CONCRETE DURING ACTIVITIES LIKE EXPOSED AGGREGATE WASH-OFF, WET CURING, OR EQUIPMENT WASHING FROM DIRECTLY OR INDIRECTLY ENTERING ANY WATERCOURSE OR STORMWATER SYSTEM.

FERTILIZERS/BIOIDES - THESE PRODUCTS WILL BE APPLIED AT RATES THAT DO NOT EXCEED THE MANUFACTURER'S SPECIFICATIONS OR ABOVE THE GUIDELINES SET FORTH IN THE CROP ESTABLISHMENT OR IN THE GSWCC MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA. ANY STORAGE OF THESE MATERIALS WILL BE UNDER ROOF IN SEALED CONTAINERS.

BUILDING MATERIALS - NO BUILDING OR CONSTRUCTION MATERIALS WILL BE BURIED OR DISPOSED OF ON-SITE. ALL SUCH MATERIAL WILL BE DISPOSED OF IN PROPER WASTE DISPOSAL PROCEDURES.

SAMPLING FREQUENCY

STORM WATER SAMPLES SHALL BE TAKEN FOR THE FOLLOWING STORM EVENTS:

- FOR EACH AREA OF THE SITE THAT DISCHARGES TO A RECEIVING STREAM, THE FIRST RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH AND ALLOWS FOR MONITORING DURING NORMAL BUSINESS HOURS (MONDAY THROUGH FRIDAY, 8:00 AM TO 5:00 PM AND SATURDAY 8:00 AM TO 5:00 PM WHEN CONSTRUCTION ACTIVITY IS BEING CONDUCTED BY THE PRIMARY PERMITTEE) THAT OCCURS AFTER ALL CLEARING AND GRUBBING OPERATIONS HAVE BEEN COMPLETED IN THE DRAINAGE AREA OF THE LOCATION SELECTED AS THE SAMPLING LOCATION.
- IN ADDITION TO (a) ABOVE, FOR EACH AREA OF THE SITE THAT DISCHARGES TO A RECEIVING STREAM, THE FIRST RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH AND ALLOWS FOR MONITORING DURING NORMAL BUSINESS HOURS (MONDAY THROUGH FRIDAY, 8:00 AM TO 5:00 PM AND SATURDAY 8:00 AM TO 5:00 PM WHEN CONSTRUCTION ACTIVITY IS BEING CONDUCTED BY THE PRIMARY PERMITTEE) THAT OCCURS EITHER 90 DAYS AFTER THE FIRST SAMPLING EVENT OR AFTER ALL MASS GRADING OPERATIONS HAVE BEEN COMPLETED IN THE DRAINAGE AREA OF THE LOCATION SELECTED AS THE SAMPLING LOCATION, WHICHEVER COMES FIRST.
- AT THE TIME OF SAMPLING PERFORMED PURSUANT TO (a) AND (b) ABOVE, IF BMP'S ARE FOUND TO BE PROPERLY DESIGNED, INSTALLED AND MAINTAINED, NO FURTHER ACTION IS REQUIRED. IF BMP'S IN ANY AREA OF THE SITE THAT DISCHARGES TO A RECEIVING STREAM ARE NOT PROPERLY DESIGNED, INSTALLED AND MAINTAINED, CORRECTIVE ACTION SHALL BE DEFINED AND IMPLEMENTED WITHIN 2 BUSINESS DAYS, AND TURBIDITY SAMPLES SHALL BE TAKEN FROM DISCHARGES FROM THAT AREA OF THE SITE FOR EACH SUBSEQUENT RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH DURING NORMAL BUSINESS HOURS (MONDAY THROUGH FRIDAY, 8:00 AM TO 5:00 PM AND SATURDAY 8:00 AM TO 5:00 PM WHEN CONSTRUCTION ACTIVITY IS BEING CONDUCTED BY THE PRIMARY PERMITTEE) UNTIL THE SELECTED TURBIDITY STANDARD IS ATTAINED, OR UNTIL POST-STORM EVENT INSPECTIONS DETERMINE THAT BMP'S ARE PROPERLY DESIGNED, INSTALLED AND MAINTAINED.

STORM WATER SAMPLING

STORM WATER SAMPLES ARE TO BE ANALYZED IN ACCORDANCE WITH THE METHODOLOGY AND TEST PROCEDURES ESTABLISHED BY 40 CFR PART 136 AND THE GUIDANCE DOCUMENT TITLED "NPDES STORM WATER SAMPLING GUIDANCE DOCUMENT, EPA 633-B-92-001."

STORM WATER IS TO BE SAMPLED FOR NHPHELMETRIC TURBIDITY UNITS (NTU) AT THE OUTFALL LOCATION. A DISCHARGE OF STORM WATER RUNOFF FROM DISTURBED AREAS WHERE BEST MANAGEMENT PRACTICES HAVE NOT BEEN PROPERLY DESIGNED, INSTALLED AND MAINTAINED SHALL CONSTITUTE A SEPARATE VIOLATION FOR EACH DAY ON WHICH SUCH CONDITION RESULTS IN THE TURBIDITY OF THE DISCHARGE EXCEEDING 75 NTU. THE VALUE THAT WAS SELECTED FROM APPENDIX B IN PERMIT GAR 100002. THE NTU IS BASED UPON THE DISTURBED ACREAGE OF 2.0 ACRES FOR THE PROJECT SITE. THE SURFACE WATER DRAINAGE AREA OF 0.3 SQUARE MILES, AND RECEIVING WATER WHICH SUPPORTS WARM WATER FISHERIES.

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Ling Wang
LIANG WANG, P.E.
GSWCC NO. 0000083427

NOTIFY FORSYTH COUNTY INSPECTOR 24 HOURS BEFORE BEGINNING PHASE OF CONSTRUCTION. (770) 781-2165



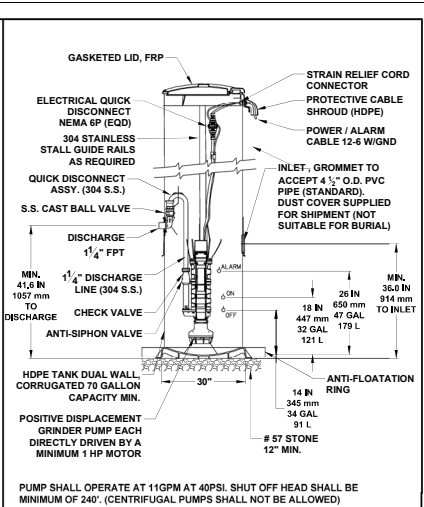
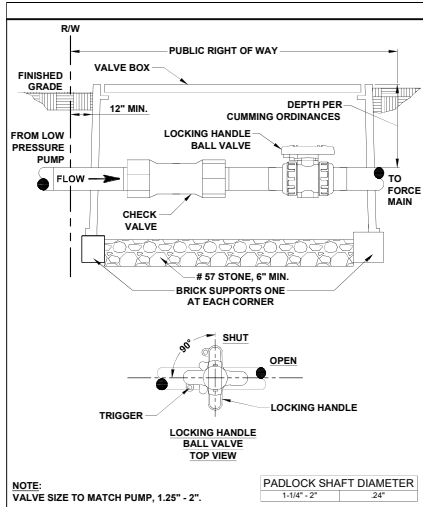
110 Spartan Drive, Suite 301
Cumming, GA 30040
(770) 971-0141
www.cecnga.com



DESIGNED BY:	MY	DRAWN BY:	JV	CHECKED BY:	GP
DATE		DESCRIPTION			
10/16/19		BID READY			

CITY OF CUMMING
HAW CREEK ROAD OUTFALL AND FORCE MAIN

E&SCP DETAILS I		SHEET
DATE: 10/09/2019		32 OF 36



NOTE: VALVE SIZE TO MATCH PUMP, 1.25" - 2".

PADLOCK SHAFT DIAMETER: 1-1/4" - 2"

DETAIL NUMBER: S-24

CITY OF CUMMING
DEPARTMENT OF UTILITIES
LOW PRESSURE CONNECTION

LATEST REVISION: 09242019

SCALE: NOT TO SCALE

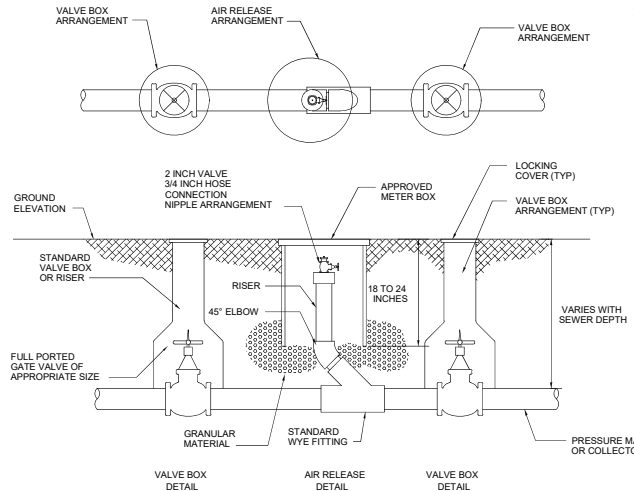
PUMP SHALL OPERATE AT 110PM AT 40PSI. SHUT OFF HEAD SHALL BE MINIMUM OF 240'. (CENTRIFUGAL PUMPS SHALL NOT BE ALLOWED)

DETAIL NUMBER: S-25

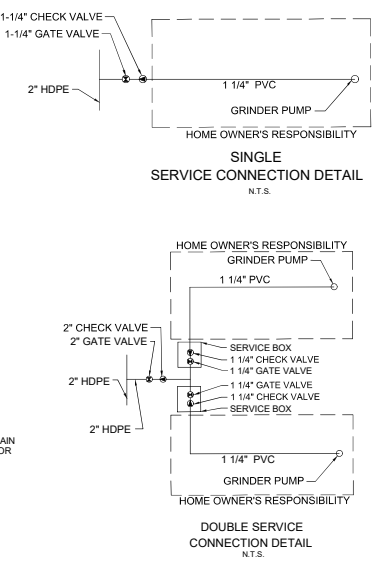
CITY OF CUMMING
DEPARTMENT OF UTILITIES
GRINDER PUMP
SIMPLEX OPERATION

LATEST REVISION: 07142017

SCALE: NOT TO SCALE



AIR RELEASE ARRANGEMENT
MANUAL AIR RELEASE
N.T.S.

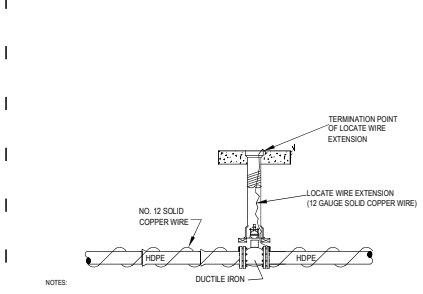


SINGLE SERVICE CONNECTION DETAIL
N.T.S.

DOUBLE SERVICE CONNECTION DETAIL
N.T.S.

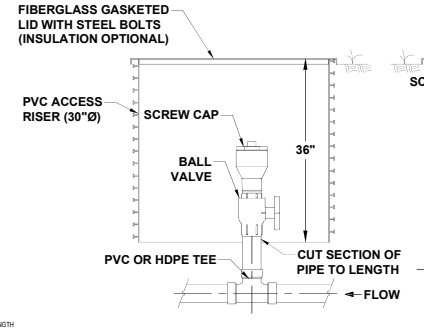
THE LOCATIONS OF ALL UTILITIES SHOWN ON THIS PLAN ARE APPROXIMATE. THEREFORE, CIVIL ENGINEERING CONSULTANTS, INC. DOES NOT GUARANTEE THAT CONDITIONS AS SHOWN ARE EXACT. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, OR HIS AGENT, TO DETERMINE THE EXACT LOCATIONS OF EXISTING UTILITIES BY NOTIFICATION OF THE OWNERS OF THE SAME BEFORE BEGINNING WORK.

IN-LINE CLEAN-OUT COMPONENT SIZING			
FORCE MAIN DIA.	SCREW CAP DIA.	VALVE & FITTINGS DIA.	ACCESS RISER & LID DIA.
2"	3"	2"	30"
2 1/2"	3"	2"	30"
3"	4"	3"	30"
4"	6"	4"	30"



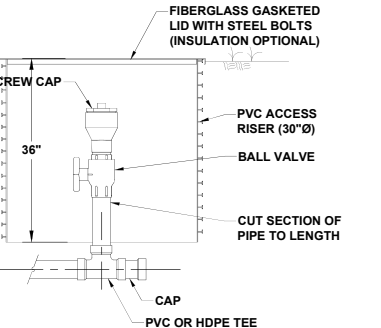
NOTES:

- USE NO. 12 AWG SOLID PLASTIC COATED COPPER WIRE.
- STRIP 2 INCHES OF COATING AND WRAP WIRE 2 TURNS UNDER "T" HEAD BOLT ON TOP OF DUCTILE IRON FITTING (VALVE). NEXT, WRAP WIRE 2 TURNS AROUND BELL OF FITTING (VALVE) AND WRAP WITH A CONTINUOUS LENGTH WITH AT LEAST 4 WRAPS PER LENGTH OF PVC PIPE TO NEXT DUCTILE IRON FITTING. TERMINATE AT FITTING IN SIMILAR MANNER AS NOTED ABOVE.
- ALL SPLICES MUST BE MADE USING COPPER WIRE "T" BOLT ASSEMBLIES AND THEN WRAPPING WITH ELECTRICAL TAPE.
- WRAPPING TRACER WIRE AROUND HDPE PIPE IS MANDATORY. WIRE MAY NOT BE STRUNG ALONG TOP OF PIPE AND TAPED TO THE PIPE.
- LOCATE WIRE EXTENSION MUST BE RUN INSIDE VALVE BOX AND MUST TERMINATE AT VALVE BOX LID. LOCATE WIRE EXTENSION MUST BE CONNECTED TO A TIE BOLT ON THE VALVE BODY.

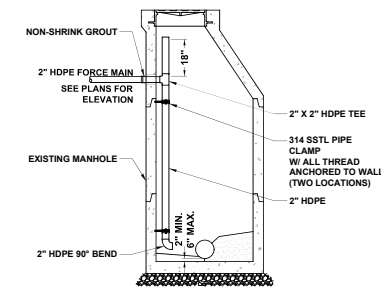


*MAINLINE INSTALLED BELOW FROST DEPTH

IN-LINE CLEAN-OUT DETAIL
N.T.S.



END CLEAN-OUT DETAIL
N.T.S.



FORCE MAIN CONNECTION DETAIL
N.T.S.

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DESIGNED BY: MY	DRAWN BY: JV	CHECKED BY: GP	CITY OF CUMMING
HAW CREEK ROAD OUTFALL AND FORCE MAIN			
LOW PRESSURE SEWER DETAILS			
DATE: _____	REVISION _____	PROJECT INCEPTION DATE: 10/09/2019	SHEET 36 OF 36

BID READY: 10/16/19