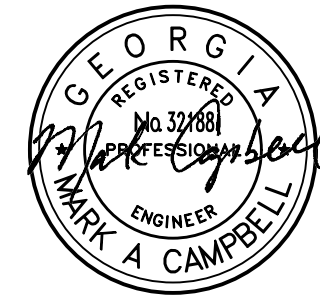


Carter Engineering Consultants, Inc.
 3651 Mars Hill Road
 Suite 2000
 Watkinsville, GA 30677
 P: 770.725.1200
 F: 706.559.7435
 www.carterengineering.net



04/12/19

PROJECT NOTES:

OWNER / DEVELOPER:
 Oconee County Government
 23 N. Main Street
 Watkinsville, Ga. 30677
 Contact: Jody Woodall, PE
 Tel.: (706) 769-2939
 e-mail: jwoodall@oconee.ga.us

ENGINEER:
 Carter Engineering Consultants, Inc.
 3651 Mars Hill Road
 Suite 2000
 Watkinsville, Georgia 30677
 Contact: Mark Campbell, P.E.
 Tel.: (770) 725-1200
 e-mail: mark@carterengineering.net



ROUNABOUT PLANS

FOR

OCONEE COUNTY GOVERNMENT

23 NORTH MAIN STREET, WATKINSVILLE, GA 30677



PROJECT LOCATION

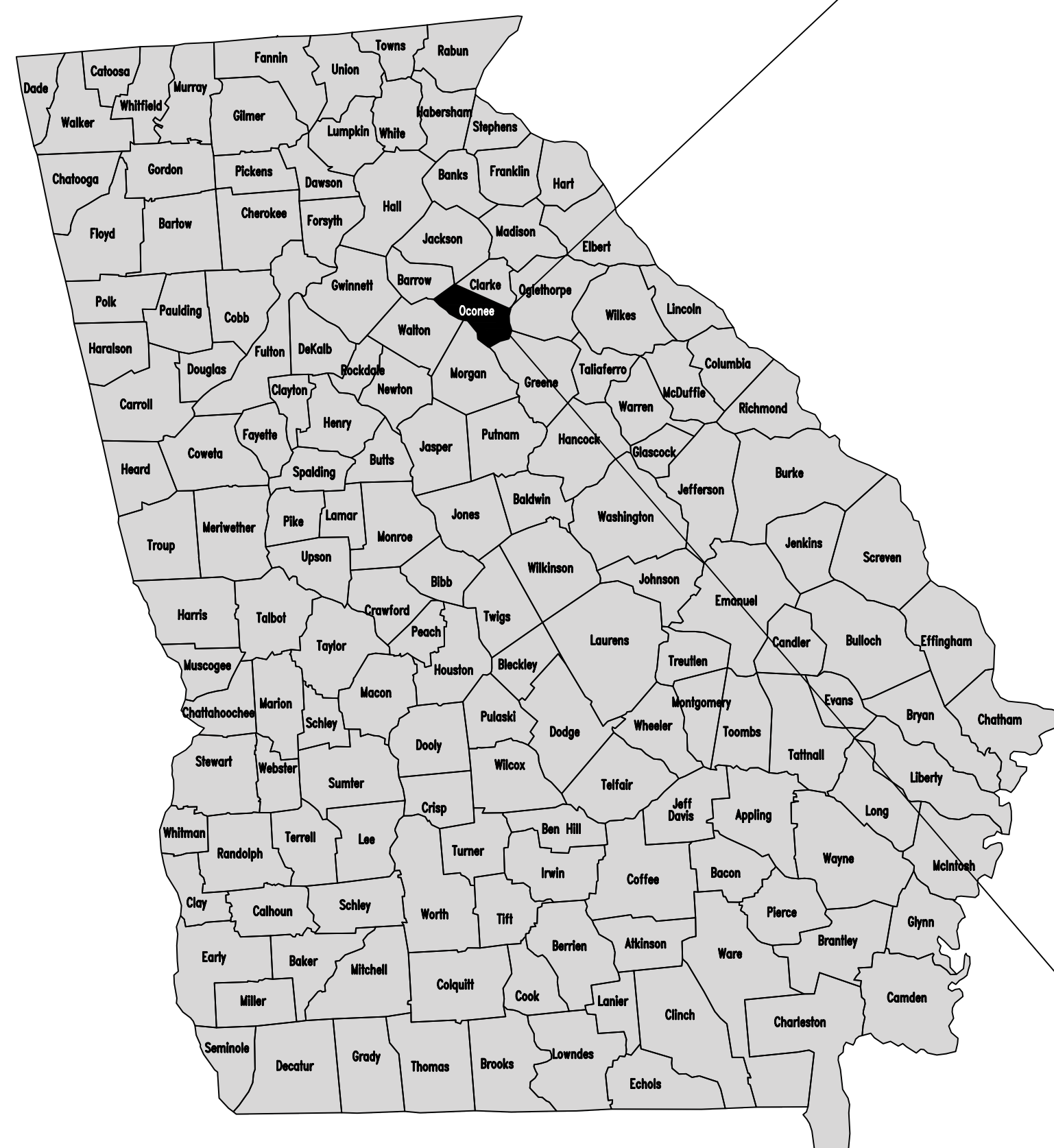
MARS HILL ROAD AND MALCOM BRIDGE ROAD
 (ROUNABOUT #1) BOGART, GEORGIA 30622
STAFF/BUS ENTRANCE AT MALCOM BRIDGE ROAD
 (ROUNABOUT #2) BOGART, GEORGIA 30622

REVISION BLOCK:

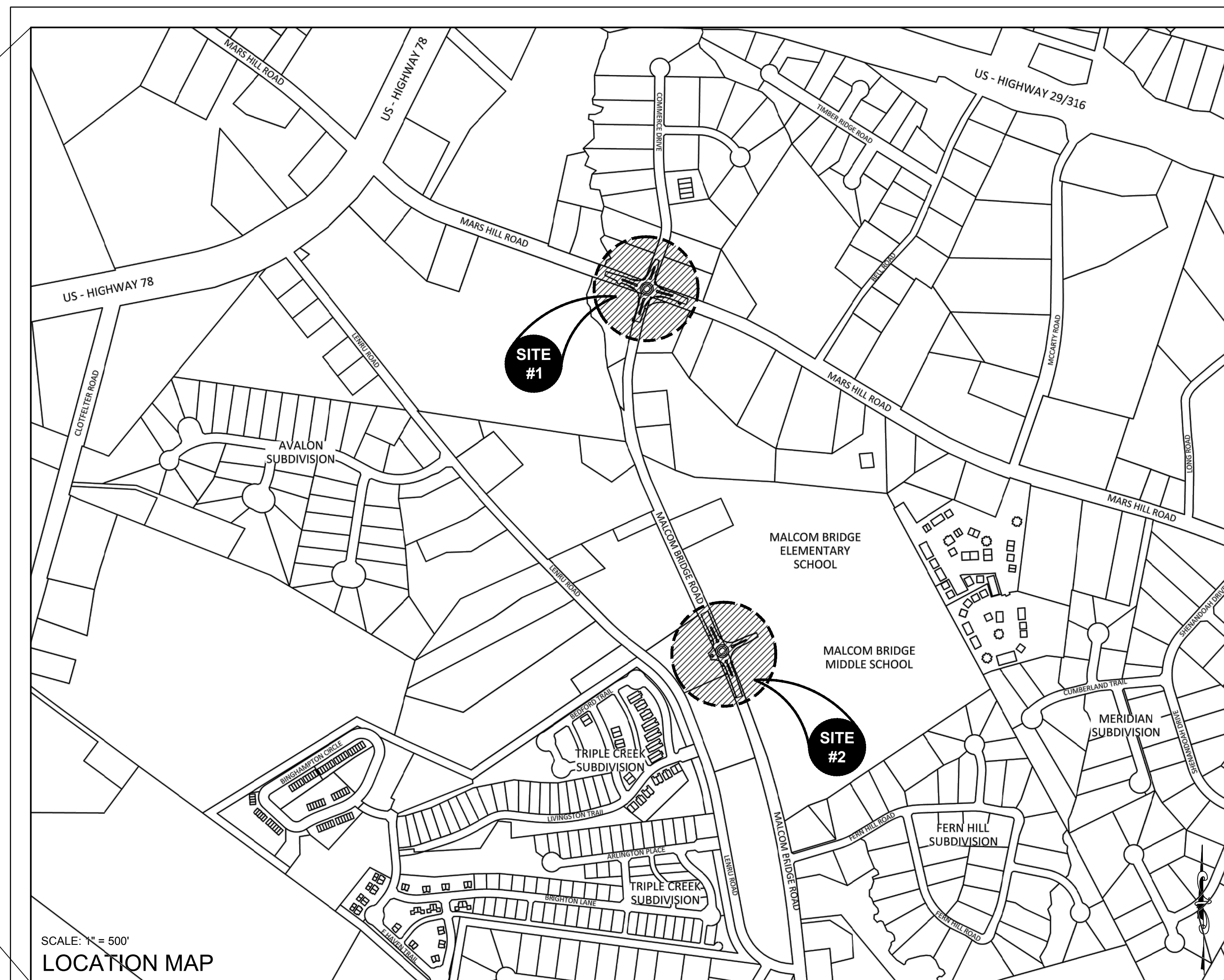
REV. #	DATE	REVISION
A	01/19/2019	INITIAL REVIEW
B	03/19/2019	90% SUBMITTAL
C	04/01/2019	ISSUE FOR REVIEW
D	04/12/2019	CONTRACTOR BID
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-

SHEET INDEX

SHEET NO.	DESCRIPTION
C-0.0	COVER
C-1.1	TOPOGRAPHIC AND EX. R.O.W. SURVEY
C-1.2	TOPOGRAPHIC AND EX. R.O.W. SURVEY
C-2.0	GENERAL NOTES
C-2.1	SITE PLAN
C-2.2	SITE PLAN
C-2.3	SITE PLAN
C-2.4	SIGN AND MARKING PLAN
C-2.5	SIGN AND MARKING PLAN
C-2.6	SIGN AND MARKING PLAN
C-2.7	PAVING PLAN
C-2.8	PAVING PLAN
C-2.9	PAVING PLAN
C-3.0	UTILITY PLAN
C-3.1	UTILITY PLAN
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C-4.0	GRADING & DRAINAGE PLAN
C-4.1	GRADING & DRAINAGE PLAN
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C-5.1	ROADWAY PROFILE I
C-5.2	ROADWAY PROFILE II
C-5.3	ROADWAY PROFILE III
C-5.4	ROADWAY PROFILE IV
C-5.5	ROADWAY PROFILE V
C-5.6	ROADWAY PROFILE VI
C-5.7	ROADWAY PROFILE VII
C-5.8	ROADWAY PROFILE VIII
C-5.9	MARS HILL RD C.S.
C-5.10	MARS HILL RD C.S.
C-5.11	MALCOM BRIDGE RD. C.S.
C-5.12	MALCOM BRIDGE RD. C.S.
C-5.13	MALCOM BRIDGE RD. C.S.
C-5.14	COMMERCE DR C.S.
C-5.15	DRIVEWAY C.S.
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C-5.18	TYPICAL SECTION
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C-7.0	MALCOM BRIDGE QUANTITIES
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D-1.0	STANDARD DETAILS
D-1.1	STANDARD DETAILS
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D-1.3	STANDARD DETAILS
D-1.4	STANDARD DETAILS
D-1.5	STANDARD DETAILS
E-1.1	ES&PC NOTES
E-1.2	PHASE I ES&PC PLAN
E-1.2.1	PHASE I ES&PC PLAN
E-1.3	PHASE II ES&PC PLAN
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E-2.1	ES&CP NOTES
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E-2.4	PHASE III ES&PC
E-3.1	ES&PC STANDARD DETAILS
L-1.0	LANDSCAPE PLAN
L-1.2	LANDSCAPE PLAN
L-1.3	LANDSCAPE DETAILS
M-1	LIGHTING PLAN
M-2	LIGHTING PLAN

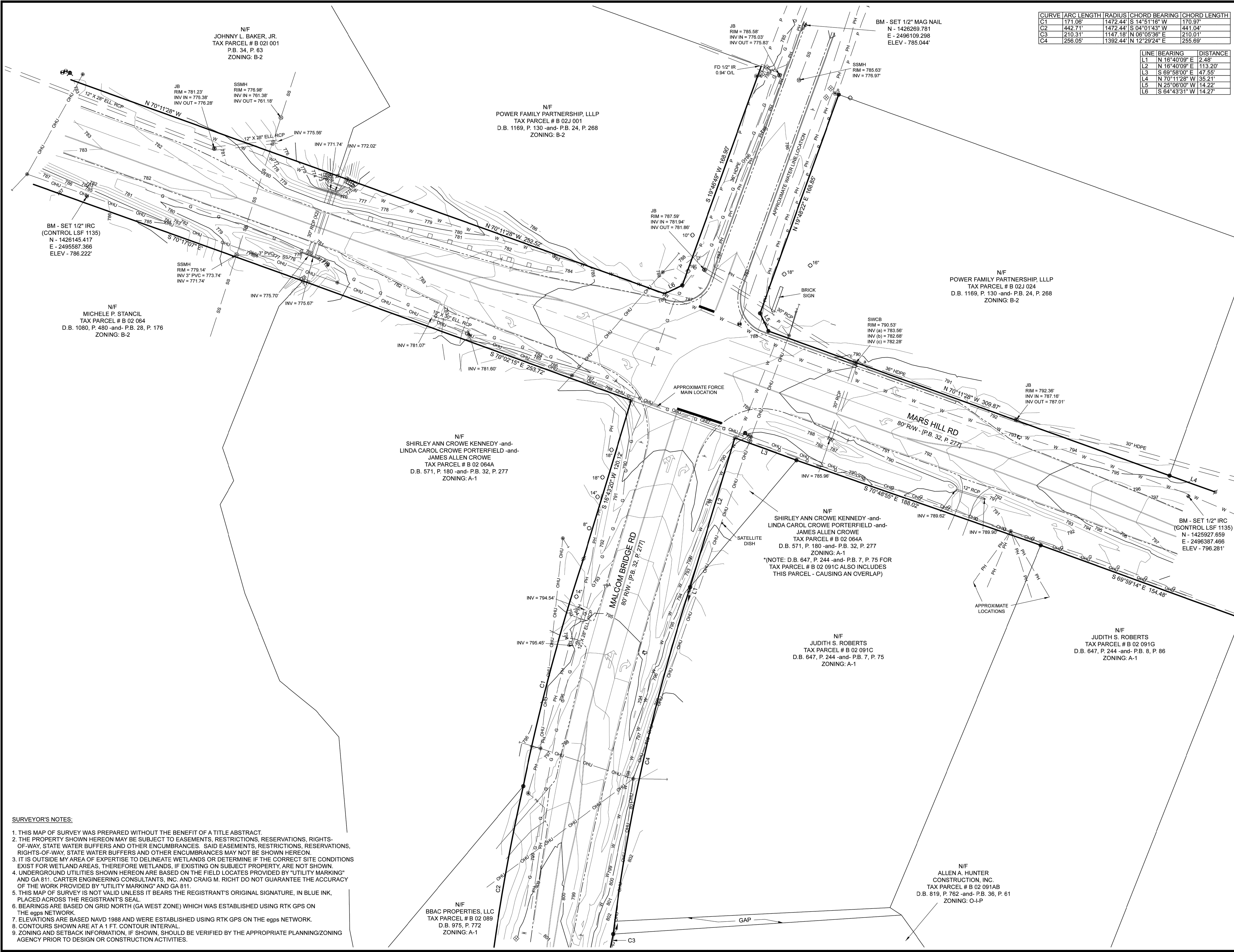


VICINITY MAP



SCALE: 1" = 500'
 LOCATION MAP

24-HOUR CONTACT: Jody Woodall, PE (706) 769-2939



CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	171.06'	1472.44'	S 14°51'16" W	170.97'
C2	442.71'	1472.44'	S 64°01'43" W	441.04'
C3	210.31'	1147.18'	N 06°05'36" E	210.01'
C4	256.05'	1392.44'	N 12°29'24" E	255.69'

LINE	BEARING	DISTANCE
L1	N 16°40'09" E	2.48'
L2	N 16°40'09" E	113.20'
L3	S 69°58'00" E	47.55'
L4	N 70°11'28" W	35.21'
L5	N 25°06'00" W	14.22'
L6	S 64°43'31" W	14.27'

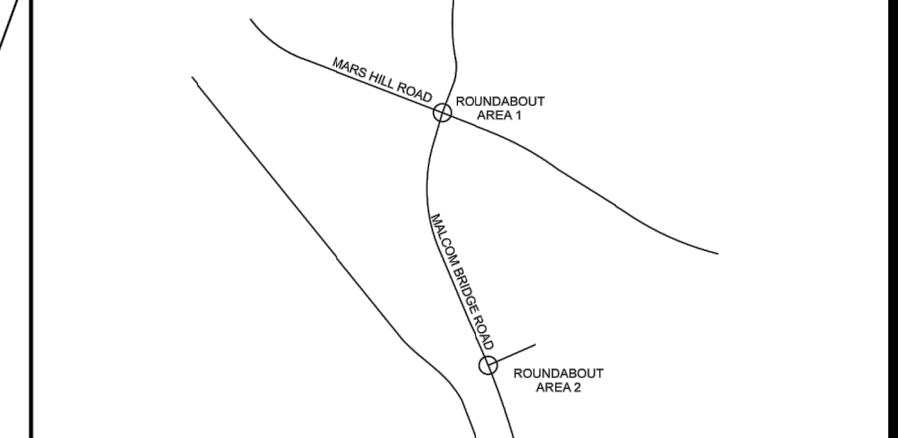
Carter Engineering Consultants, Inc.
 3651 Mars Hill Road
 Suite 2000
 Watkinsville, GA 30677
 P: 770-725-1200
 www.carterengineering.net

**TOPOGRAPHIC AND EXISTING
 RIGHT-OF-WAY SURVEY OF
 ROUNDABOUT 1 AREA FOR:**

OCONEE COUNTY GOVERNMENT

**P/O MARS HILL ROAD -and-
 P/O MALCOM BRIDGE ROAD
 OCONEE COUNTY, GA
 G.M.D. 240**

REPRODUCTIONS, MODIFICATIONS OR ASSIGNMENTS OF THIS DOCUMENT WITHOUT THE WRITTEN APPROVAL OF CARTER ENGINEERING CONSULTANTS, INC. ARE PROHIBITED AND MAY INVALIDATE THE SEAL AND ANY LIABILITY THAT CARTER ENGINEERING CONSULTANTS, INC. MAY HAVE IN THIS DOCUMENT.



LOCATION MAP - NTS

LEGEND OF SURVEY ABBREVIATIONS/SYMBOLS

A	ARC LENGTH	⬇	BACKFLOW PREVENTER
AC	AIR CONDITIONER	⬇	BENCHMARK/CONTROL
BSL	BUILDING SETBACK LINE	⊗	BOLLARD
CL	CENTERLINE	⊗	BURIED CABLE POST
CM	CONCRETE MONUMENT	⊗	CABLE TV PEDESTAL
CMP	CORRUGATED METAL PIPE	⊗	CATCH BASIN (SINGLE WING)
CONC	CONCRETE	⊗	CATCH BASIN (DOUBLE WING)
COV	COVERED	⊗	CHAIN LINK FENCE
DB	DEED BOOK	⊗	ELECTRIC BOX
DE	DRAINAGE EASEMENT	⊗	ELECTRIC MANHOLE
DWCB	DOUBLE WING CATCH BASIN	⊗	ELECTRIC METER
ENCR	ENCROACHMENT	⊗	ELECTRIC PEDESTAL
EIP	EDGE OF PAVEMENT	⊗	FIRE HYDRANT
ESMT	EASEMENT	⊗	GAS BOX
ET	ELECTRIC TRANSFORMER	⊗	GAS LINE (BURIED)
FES	FLARED END SECTION	⊗	GAS METER
FD	FOUND	⊗	GAS POST
FF	FINISHED FLOOR	⊗	GAS VALVE
INV	INVERT	⊗	GAS VENT STACK
IP	IRON PIPE	⊗	GATEWAY VALVE
IPC	IRON PIPE WITH CAP	⊗	GREASE TRAP MH
IR	IRON REBAR	⊗	GUYANCHOR
IRC	IRON REBAR WITH CAP	⊗	IRRIGATION CONTROL VALVE
M	MEASURED	⊗	METAL LIGHT POLE
MH	MANHOLE	⊗	OVERHEAD UTILITIES
NH	NOW OR FORMERLY	⊗	PHONE LINE (BURIED)
NTS	NOT TO SCALE	⊗	POWER (BURIED)
O/S	OFFSET	⊗	SANITARY SEWER CLEAN-OUT
P	PLAT	⊗	SS LINE (BURIED)
PB	PLAT BOOK	⊗	SANITARY SEWER MANHOLE
PDI	PEDESTAL DROP INLET	⊗	SIGN
PG	PAGE	⊗	STORM SEWER MANHOLE
POB	POINT OF BEGINNING	⊗	STORM SEWER LINE (BURIED)
POC	POINT OF COMMENCEMENT	⊗	STREET/PARKING LIGHT
R	RADIAL/RADIUS	⊗	STUB (UNKNOWN)
RCP	REINFORCED CONCRETE PIPE	⊗	TELEPHONE PEDESTAL
R/W	RIGHT-OF-WAY	⊗	TRAFFIC SIGNAL BOX
SWB	STATE WATERS BUFFER	⊗	WATER LINE (BURIED)
SWCB	SINGLE WING CATCH BASIN	⊗	WATER METER
SS	SANITARY SEWER	⊗	WELL
SSMH	SANITARY SEWER MANHOLE	⊗	WOOD FENCE
TYP	TYPICAL	⊗	WOOD LIGHT POLE
UE	UTILITY EASEMENT	⊗	WOOD POLE
●	FOUND 1/2" IR	⊗	MAGNOLIA TREE
⊗	FD 5"x5" CONC MONUMENT	⊗	OAK TREE
⊗	SET 1/2" IRC LSF 1135		
⊗	POINT ONLY		

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REGISTERED LAND SURVEYOR: CRAIG M. RICHT
 GEORGIA, L.S. #3136

	DATE PREPARED: 1-28-19	
	PROJECT #: 180010CG	
	REVISIONS: ADDED MORE TOPOGRAPHY AND SELECTED TREES	
		SHEET #: 1/2

- SURVEYOR'S NOTES:**
1. THIS MAP OF SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE ABSTRACT.
 2. THE PROPERTY SHOWN HEREON MAY BE SUBJECT TO EASEMENTS, RESTRICTIONS, RESERVATIONS, RIGHTS-OF-WAY, STATE WATER BUFFERS AND OTHER ENCUMBRANCES. SAID EASEMENTS, RESTRICTIONS, RESERVATIONS, RIGHTS-OF-WAY, STATE WATER BUFFERS AND OTHER ENCUMBRANCES MAY NOT BE SHOWN HEREON.
 3. IT IS OUTSIDE MY AREA OF EXPERTISE TO DELINEATE WETLANDS OR DETERMINE IF THE CORRECT SITE CONDITIONS EXIST FOR WETLAND AREAS, THEREFORE WETLANDS, IF EXISTING ON SUBJECT PROPERTY, ARE NOT SHOWN.
 4. UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON THE FIELD LOCATES PROVIDED BY "UTILITY MARKING" AND GA 811. CARTER ENGINEERING CONSULTANTS, INC. AND CRAIG M. RICHT DO NOT GUARANTEE THE ACCURACY OF THE WORK PROVIDED BY "UTILITY MARKING" AND GA 811.
 5. THIS MAP OF SURVEY IS NOT VALID UNLESS IT BEARS THE REGISTRANT'S ORIGINAL SIGNATURE, IN BLUE INK, PLACED ACROSS THE REGISTRANT'S SEAL.
 6. BEARINGS ARE BASED ON GRID NORTH (GA WEST ZONE) WHICH WAS ESTABLISHED USING RTK GPS ON THE eggs NETWORK.
 7. ELEVATIONS ARE BASED NAVD 1988 AND WERE ESTABLISHED USING RTK GPS ON THE eggs NETWORK.
 8. CONTOURS SHOWN ARE AT A 1 FT. CONTOUR INTERVAL.
 9. ZONING AND SETBACK INFORMATION, IF SHOWN, SHOULD BE VERIFIED BY THE APPROPRIATE PLANNING/ZONING AGENCY PRIOR TO DESIGN OR CONSTRUCTION ACTIVITIES.

N/F
 JOHNNY L. BAKER, JR.
 TAX PARCEL # B 021 001
 P.B. 34, P. 63
 ZONING: B-2

N/F
 POWER FAMILY PARTNERSHIP, LLLP
 TAX PARCEL # B 02J 001
 D.B. 1169, P. 130 -and- P.B. 24, P. 268
 ZONING: B-2

BM - SET 1/2" IRC
 (CONTROL LSF 1135)
 N - 1426145.417
 E - 2495587.366
 ELEV - 786.222'

N/F
 MICHELE P. STANCIU
 TAX PARCEL # B 02 064
 D.B. 1080, P. 480 -and- P.B. 28, P. 176
 ZONING: B-2

N/F
 SHIRLEY ANN CROWE KENNEDY -and-
 LINDA CAROL CROWE PORTERFIELD -and-
 JAMES ALLEN CROWE
 TAX PARCEL # B 02 064A
 D.B. 571, P. 180 -and- P.B. 32, P. 277
 ZONING: A-1

N/F
 SHIRLEY ANN CROWE KENNEDY -and-
 LINDA CAROL CROWE PORTERFIELD -and-
 JAMES ALLEN CROWE
 TAX PARCEL # B 02 064A
 D.B. 571, P. 180 -and- P.B. 32, P. 277
 ZONING: A-1
 *(NOTE: D.B. 647, P. 244 -and- P.B. 7, P. 75 FOR
 TAX PARCEL # B 02 091C ALSO INCLUDES
 THIS PARCEL - CAUSING AN OVERLAP)

N/F
 JUDITH S. ROBERTS
 TAX PARCEL # B 02 091C
 D.B. 647, P. 244 -and- P.B. 7, P. 75
 ZONING: A-1

N/F
 JUDITH S. ROBERTS
 TAX PARCEL # B 02 091G
 D.B. 647, P. 244 -and- P.B. 8, P. 86
 ZONING: A-1

N/F
 ALLEN A. HUNTER
 CONSTRUCTION, INC.
 TAX PARCEL # B 02 091AB
 D.B. 819, P. 762 -and- P.B. 36, P. 61
 ZONING: O-I-P

N/F
 BBAC PROPERTIES, LLC
 TAX PARCEL # B 02 089
 D.B. 975, P. 772
 ZONING: A-1

CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	1180.06'	5769.58'	S 18°36'02" E	1178.00'
C2	537.72'	5580.26'	N 19°39'11" W	537.51'
C3	195.33'	5580.26'	N 23°24'59" W	195.32'

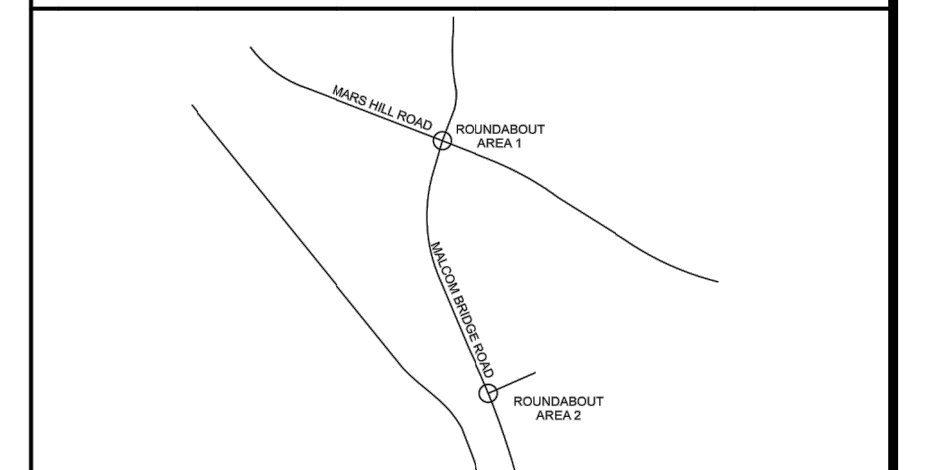
Carter Engineering Consultants, Inc.
 3651 Mars Hill Road
 Suite 2000
 Watkinsville, GA 30677
 P: 770-725-1200
 www.carterengineering.net

**TOPOGRAPHIC AND EXISTING
 RIGHT-OF-WAY SURVEY OF
 ROUNDABOUT 2 AREA FOR:**

OCONEE COUNTY GOVERNMENT

**P/O MALCOM BRIDGE ROAD
 OCONEE COUNTY, GA
 G.M.D. 240**

REPRODUCTIONS, MODIFICATIONS OR ASSIGNMENTS OF THIS DOCUMENT WITHOUT THE WRITTEN APPROVAL OF CARTER ENGINEERING CONSULTANTS, INC. ARE PROHIBITED AND MAY INVALIDATE THE SEAL AND ANY LIABILITY THAT CARTER ENGINEERING CONSULTANTS, INC. MAY HAVE IN THIS DOCUMENT.



LOCATION MAP - NTS

LEGEND OF SURVEY ABBREVIATIONS/SYMBOLS

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AC	AIR CONDITIONER	⬇	BENCHMARK/CONTROL
BSL	BUILDING SETBACK LINE	⊗	BOLLARD
CL	CENTERLINE	⊗	BURIED CABLE POST
CM	CONCRETE MONUMENT	⊗	CABLE TV FEDESTAL
CMP	CORRUGATED METAL PIPE	⊗	CATCH BASIN (SINGLE WING)
CONC	CONCRETE	⊗	CATCH BASIN (DOUBLE WING)
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DWCB	DOUBLE WING CATCH BASIN	⊗	ELECTRIC METER
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ESMT	EASEMENT	⊗	GAS BOX
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FES	FLARED END SECTION	⊗	GAS METER
FD	FOUND	⊗	GAS POST
FF	FINISHED FLOOR	⊗	GAS VALVE
INVERT	INVERT	⊗	GAS VENT STACK
IP	IRON PIPE	⊗	GATE/WATER VALVE
IPC	IRON PIPE WITH CAP	⊗	GREASE TRAP MH
IR	IRON REBAR	⊗	GUYANCHOR
IRC	IRON REBAR WITH CAP	⊗	IRRIGATION CONTROL VALVE
M	MEASURED	⊗	METAL LIGHT POLE
MH	MANHOLE	⊗	METAL LIGHT POLE
NF	NOW OR FORMERLY	⊗	OVERHEAD UTILITIES
NTS	NOT TO SCALE	⊗	PHONE LINE (BURIED)
O/S	OFFSET	⊗	POWER (BURIED)
P	PLAT	⊗	SANITARY SEWER CLEAN-OUT
PB	PLAT BOOK	⊗	SS LINE (BURIED)
PDI	PEDESTAL DROP INLET	⊗	SANITARY SEWER MANHOLE
PG	PAGE	⊗	SIGN
POB	POINT OF BEGINNING	⊗	STORM SEWER MANHOLE
POC	POINT OF COMMENCEMENT	⊗	STORM SEWER LINE (BURIED)
R	RADIAL/RADIUS	⊗	STREET/PARKING LIGHT
RCP	REINFORCED CONCRETE PIPE	⊗	STUB (UNKNOWN)
ROW	RIGHT-OF-WAY	⊗	TELEPHONE PEDESTAL
SWB	STATE WATERS BUFFER	⊗	TRAFFIC SIGNAL BOX
SWCB	SINGLE WING CATCH BASIN	⊗	WATER METER
SS	SANITARY SEWER	⊗	WELL
SSMH	SANITARY SEWER MANHOLE	⊗	WOOD FENCE
TYP	TYPICAL	⊗	WOOD LIGHT POLE
UE	UTILITY EASEMENT	⊗	WOOD POLE
●	FOUND 1/2" IR	⊗	MAGNOLIA TREE
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⊗	SET 1/2" IRC LSF 1135		
⊗	POINT ONLY		

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REGISTERED LAND SURVEYOR: CRAIG M. RICHT
 GEORGIA L.S. #3136

	DATE PREPARED:	1-28-19
	PROJECT #:	180010CG
	DATE:	3-21-19

REVISIONS:	DATE:
ADDED MORE TOPOGRAPHY AND SELECTED TREES	3-21-19

GRAPHIC SCALE
 0' 15' 30' 60' 90'
 SCALE: 1" = 30'

SHEET #
 2
 2

N/F
 ANGELA HAAGEN -and-
 CHARLIE'S DARK CORNER, LLC
 TAX PARCEL # B 02 090
 D.B. 1387, P. 404 -and- D.B. 990, P. 801
 P.B. 37, P. 242
 ZONING: A-1

BM - FD 1/2" IR
 N - 1424013.694
 E - 2496345.457
 ELEV - 820.327'

N/F
 OCONEE COUNTY, GEORGIA
 TAX PARCEL # B 02 093BA
 D.B. 720, P. 60
 ZONING: R-2-MPD

N/F
 OCONEE COUNTY SCHOOL DISTRICT
 TAX PARCEL # B 02 094
 D.B. 293, P. 193 -and- P.B. 24, P. 78
 ZONING: A-1

BM - SET 1/2" IRC
 (CONTROL LSF 1135)
 N - 1423738.165
 E - 2496549.154
 ELEV - 816.203'

N/F
 OCONEE COUNTY SCHOOL DISTRICT
 TAX PARCEL # B 02 094
 D.B. 293, P. 193 -and- P.B. 24, P. 78
 ZONING: A-1

N/F
 LENRU DEVELOPMENT, LLC
 TAX PARCEL # B 02 093B
 D.B. 1141, P. 730 -and- P.B. 17, P. 250
 ZONING: R-2-MPD

- SURVEYOR'S NOTES:**
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 - ELEVATIONS ARE BASED NAVD 1988 AND WERE ESTABLISHED USING RTK GPS ON THE egps NETWORK.
 - CONTOURS SHOWN ARE AT A 1 FT. CONTOUR INTERVAL.
 - ZONING AND SETBACK INFORMATION, IF SHOWN, SHOULD BE VERIFIED BY THE APPROPRIATE PLANNING/ZONING AGENCY PRIOR TO DESIGN OR CONSTRUCTION ACTIVITIES.

General Notes:

- The General Notes are to be supplemented by any and all other notes contained within the Construction Plans.
- The Contractor shall ensure that a complete set of construction plans is kept on the job site at all times.
- All work to be done in accordance with the Georgia Department of Transportation "Standard Specifications for Roads and Bridge Construction," 2016 Edition with Supplements and Revisions.
- The Contractor shall assign and have on site at all times a competent superintendent knowledgeable of the construction techniques required to perform the various types of work being performed. IE Concrete, asphalt, storm drain etc... The Superintendent shall have full authority over all work forces and shall assure all work is performed per specified guidelines, specifications and remains on schedule.
- The Contractor shall maintain the safety and convenience of the general public and the residents along all affected roadways. The Contractor shall protect their persons and property as specified in Sections 104.05, 107.07, 107.09, and 150.00 of the Georgia Department of Transportation "Specifications for Roads and Bridge Construction," 2016 Edition, with Supplements and Revisions.
- All persons including subcontractors employed by the contractor shall wear personal protective gear including reflective safety vests while working within the project limits.
- The Contractor shall install and maintain construction safety fencing in areas of excavation as required and directed by the Project Manager.
- A staged construction plan for maintaining traffic throughout the project shall be submitted for approval by Owner within 10 days of Notice of Award. The contractor shall provide a detailed traffic control striping and signage plan for each stage of construction.
- The Contractor shall furnish, install, and maintain all required barricades, signs, and other traffic control devices in compliance with the "Manual on Uniform Traffic Control Devices," 2009 Edition.
- Storage or Materials and equipment shall be at locations approved by the Project Manager.
- Aggregate Surface Course will be considered for payment only when used in temporary driveway construction. Other uses of aggregate surface course or gravel aggregate base shall be considered as Traffic Control.
- The Contractor shall be responsible for the repair and/or replacement of all damaged property, including but not limited to structures, foundations, driveways, sidewalks, fences and landscape amenities. The Contractor shall protect all landscape amenities and shall be responsible for their relocation and/or replacement during the construction period as required by the Project Manager.
- The contractor shall use temporary asphalt and or asphalt milling to maintain a safe and smooth riding surface as required by the Project Manager with all costs to be considered as incidental to Traffic Control.
- The Contractor shall provide and maintain acceptable access to all businesses and residences to include driveways, sidewalks and stair entrances during the construction period as determined by the Project Manager.
- The Contractor shall be responsible for uninterrupted mail service during the construction period. When necessary, mailboxes shall be temporarily relocated to a location convenient to mail carrier and patron.
- The Contractor shall be responsible for maintaining uninterrupted utility services to all affected businesses and residences during the construction period. Any and all service interruptions shall be reported to the Project Manager and shall be promptly repaired at the expense of the Contractor.
- The Contractor shall be required to use the one-call center telephone number, 1-800-282-7411, for the purpose of coordinating the marking of underground utilities.
- The following utilities may have facilities in the project area.

Charter Communication 495 Hawthorne Avenue Athens, GA 30606 Office: (706) 227-7310 Cell: (706) 215-8075 Contact: Ray Cortez rcortez@charter.com	Southern Company Gas 10 Peachtree Place NE Atlanta, GA 30309 Office: 404-584-3176 Cell: 470-316-6836 Contact: Ginny Mauldin-Kinney vmauldin@southernco.com
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AT&T 125 Reese Street Athens, GA 30601 Phone: 706-353-4304 Cell: 770-540-4189 Fax: 706-548-1621 Contact: Chris Martin cm1028@att.com	Georgia Power Distribution 205 Dairy Pak Road Athens, GA 30607 Office: 404-989-5876 Fax: 706-357-6670 Contact: Galen Davis gdavis@southernco.com
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Walton EMC 842 US 78 Monroe, GA 30655 Office: 770-267-2505 Fax: 770-601-2795 Contact: Terry Allgood tallgood@waltonemc.com	Parker Fiber Systems 10005 Commerce Street Summerville, GA 30747 Phone: 706-857-4646 Cell: 678-332-6518 Contact: Preston Watson preston@parkersystems.net
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Oconee County Public Works 1291 Greensboro Highway Watkinsville, GA 30677 Phone: 706-769-2937 Contact: Jody Woodall jwoodall@oconee.ga.us	Oconee County Water Resources 1291 Greensboro Highway Watkinsville, GA 30677 Phone: 706-769-3960 Contact: Adam Layfield alayfield@oconee.ga.us
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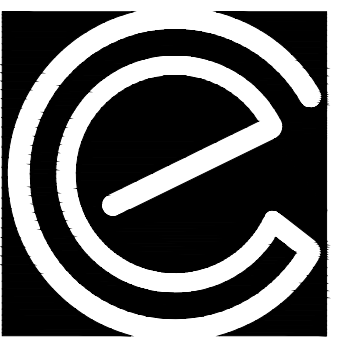
- The Contractor shall notify all affected utility companies no later than 72 hours prior to any demolition or construction where water meter/service line adjustments, gas line adjustments and/or manhole adjustment/relocation is required.
- Contractors performing Water and Sewer type construction shall be on Oconee County Water Resources Department, Approved Contractors list.
- Utility locations shown are approximate and shall be field verified prior to construction. The Contractor shall be responsible for verifying site conditions and the locations of all piping and utility installations, including but not limited to, manholes, boxes and services with respect to each utility. The Contractor shall ensure the protection and maintenance of all utilities and shall be responsible for their repair and replacement if damaged. No additional payment or time shall be considered due to any required work associated with repairs or replacement.
- The Contractor shall be responsible for determining and resolving conflicts between the work and utilities, both underground and aerial (including poles). Such determinations shall be made in a timely manner to permit adjustments to be made before construction progress is obstructed.
- Contractor shall submit sketches/shop drawings for resolving utility conflicts to the Project manager for approval and shall coordinate necessary adjustments or relocations with all utility companies involved. No additional payment or time shall be considered due to any required work associated with resolving conflicts with utilities.
- The Contractor shall notify Oconee County Public Works 72 hours before assistance is needed with traffic related items.
- The Contractor shall strictly adhere to dust control guidelines as set forth in Section 161-Control of Soil and Sedimentation, Sub-section 161.01 Description, of the Georgia Department of Transportation "Standard Specifications for Roads and Bridge Construction," 2016 Edition. No additional compensation will be made for dust control.
- The contractor shall install and maintain all soil and erosion control measures as shown on the plans and as required by the Project Manager. The Contractor shall be responsible for maintaining all erosion and sediment control devices at all times and shall at all times be in compliance with the Georgia Department of Transportation "Standard Specifications for Roads and Bridge Construction," 2016 Edition with Supplements and Revisions. Additional erosion and sediment control measures will be installed if deemed necessary by the Project Manager.
- Erosion Control Check Dams may be Rip-Rap or Baled Straw as determined applicable by the Project Manager. As a minimum the contractor shall apply temporary Mulch to all cut and fill slopes within 5 days of grading and shall perform temporary grassing within two weeks of grading.
- All disturbed areas outside the limits of construction are to be restored and grassed in kind by the contractor at his expense, with grass or sod, I.E. Fescue for Fescue, Bermuda Sod for Bermuda Sod, Zoysia for Zoysia, etc.
- It shall be the Contractor's responsibility to legally dispose of any unsuitable or waste material.
- Vertical and horizontal checks shall be performed to verify accuracy of all survey control points and referenced coordinates. Any discrepancy shall be resolved prior to commencing with the project layout.
- Additional survey control points will be established and protected outside the construction limits every 500 LF. prior to beginning construction.
- All property line monuments outside the construction limits disturbed in the prosecution of the work shall be reset by a professional land surveyor licensed by the State of Georgia, at the Contractor's expense.
- The grades of all ditches and culverts shall not be less than 1% unless otherwise shown on the Plans.
- All Storm drains and side drains shall be graded to drain
- All Storm and Sidedrain pipe shall be Type III, Reinforced Concrete Pipe.
- All manhole, catch basin, and drop inlet bottoms shall meet GDOT Standards and Details with the exception that brick bottoms shall not be allowed.
- Covers for all 1033 and 1034 type Catch Basins shall be GADOT Standard.
- Hoods for all 1019 type Drop Inlets shall be GADOT Standard.
- Covers for all 1011A Storm Sewer Manholes shall be GADOT Standard.
- All new storm drains to have a minimum of 18" of clearance over water mains, unless otherwise shown in the plans. Alternatively the storm drain shall be placed under the water main or supported by concrete pipe supports. Concrete pipe supports shall be considered incidental to the associated pay item.
- All new storm drains to have a minimum of 18" of clearance over sanitary sewer lines, unless otherwise shown in the plans. Sanitary Sewer line crossings with less than 18" of clearance will be replaced with ductile iron pipe and will be paid for under the associated pay item. Concrete pipe supports shall be considered incidental to the associated pay item.
- Any and all Concrete Collars shall be considered incidental to the associated pay item.
- All abandoned pipes are to be capped or plugged using brick and mortar or 8" thick concrete. This work is part of and considered incidental to the work of the associated pay item.
- Concrete used for Concrete Trench Cap and Concrete Base or Pavement Widening shall be of the following Types and required curing times prior to normal traffic loading.
 - Class B cured a minimum 14 days
 - Class AA I with Type III cement cured minimum 72 hours.
 - GADOT Accelerated Strength Concrete cured minimum 12 hours
 - Concrete found receiving traffic loading prior to the above cure times will be rejected. No added compensation shall be added for Class AA I or GADOT Accelerated Strength Concrete when it is used to allow earlier traffic loading to expedite the work.
- All Storm Sewer Trench cap shall be 8-inch-thick concrete overlaid with 1.5 or 2 inches of Temporary Asphalt until final paving phase of project at which time the Temporary Asphalt will be milled and replaced with permanent asphalt, thickness and type specified on plans.
- Corrugated metal pipe remaining under the pavement shall be filled with flowable fill.
- All existing Sanitary and Storm Sewer Manholes and water valve boxes shall be referenced, lowered and protected prior to roadway excavation and/or milling operations. Tops of all new storm sewer manholes shall be left below roadway grade and protected until final surface course has been installed. This work shall be considered part of an incidental to the associated pay item.
- Final adjustment of manholes and water valve boxes shall be performed after the final surface course has been installed. The contractor shall reference, and lower water valves and manholes below proposed grade prior to pavement removal.

- Rock encountered in trench line excavation that requires blasting to excavate, shall be paid for as Rock Excavation. Contractor shall excavate rock utilizing up to a 75,000 LB excavator equipped with rock buckets, hammer/breakers, rippers or other attachments before resorting to the use of blasting. Rock requiring the use of an excavator larger than 75,000 lb. equipped with aforementioned attachments will be paid for as Rock Excavation
- Where wet conditions and unstable foundation materials are encountered in trench lines, Foundation Backfill Material will be used at a depth directed by the Project Manager and shall be paid for as Foundation Backfill Material Type II.
- When unsatisfactory non-compactable backfill material is encountered in trench lines as determined by the Project Manager, Type I Back Fill Material will be used and paid for as Section 206, Borrow Excavation.
- Layout of curb and gutter, sidewalk, driveways and checking of vertical and horizontal alignment of associated forms shall be performed by the contractor and inspected by the Project Manager. Such inspections shall be requested in a timely manner to permit adjustments if necessary, prior to installation of concrete.
- Existing pavement will be saw cut by the Contractor, as shown on the plans and as directed by the Project Manager, to provide a smooth and even tie-in for the placement of the new pavement surface. The saw cutting is incidental to the cost of associated pay item.
- The contractor shall be responsible for any damage to trees that are scheduled to remain throughout the Work, inside and bordering the temporary and permanent easements. Special care shall be taken so as not to break limbs, scar the bark, or cut/damage tree roots during construction. The Project Manager shall meet with the contractor prior to beginning of clearing and designate and mark trees which will remain throughout the Project.
- Tree Protection fencing shall be placed outside the critical root zone of all trees where possible. Instructions from the Project Manager will be obtained if this is not possible.
- No equipment shall be parked or operated on any root zone of trees along the construction area. Roots encountered during excavation shall be neatly cut.
- Any tree damage shall be reported immediately to the Project Manager.
- Adjustments to water meter box and traffic pull boxes shall be considered part of an incidental to the associated pay item. Water Meter Boxes remaining in the sidewalk will be centered over the shut off valves.
- Removal and resetting of signs and/or necessary temporary signage required, will be considered incidental to work. No additional compensation shall be made for these items. Locations of relocated signs shall be directed by the Engineer.
- All curb & gutter and header curb requires the installation of compacted Graded Aggregate Base prior to forming and the placing of concrete.
- All curb and gutter that is to be removed and replaced shall be removed and replaced to the nearest full joint. Transition proposed curb and gutter as to assure a smooth tie-in. No separate payment.
- Clearing, excavation and haul of any unsuitable material from trench lines, embankments or other gradients will be considered incidental to the work of the associated pay item.
- Contractor to align all water proposed inlets with weir perpendicular to swale/ditch sections.
- Normal work hours of the Project are between the hours of 7:00 A.M. to 7:00 P.M. Eastern Time Monday through Friday. Lane Closures are permitted between the hours of 9:00 A.M. and 4:00 P.M. Eastern Time and 6:00 P.M. to 6:00 A.M. Eastern Time Monday through Friday. There will be no Lane Closures permitted between the hours of 6:00 A.M. to 9:00 A.M. Eastern Time and 4:00 P.M. to 6:00 P.M. Eastern Time Monday through Friday. These conditions shall apply to all work performed during the course of the project except milling and paying operations.
- Milling and Paving Lane Closures are permitted beginning at 8:00 A.M. Eastern Time. All travel lanes shall be reopened by 9:00 P.M. Eastern Time.
- The contractor shall notify Oconee County Public Works Department and the Project Manager 10 business days before any lane shifts or reconfigurations.
- Before the commencement of the work, the contractor shall establish existing pavement elevations throughout the project limit by collecting pavement elevation shots between the existing edge of pavement at 20 feet interval. Pavement shots shall be taken at each edge of pavement as well as every break in pavement slopes between the pavement edges.
- Electronic Message Boards shall be installed 5 business days prior to start of construction to advise and inform the public and shall remain on the site through the duration of the project. Four message boards are required, and the cost are incidental to Traffic Control.

REVISION BLOCK	REV #	DATE	REVISION
A	01/19/2019	INITIAL REVIEW	
B	03/19/2019	50% SUBMITTAL	
C	04/01/2019	ISSUE FOR REVIEW	
D	04/12/2019	CONTRACTOR BID	



04/12/19


**CARTER
ENGINEERING
CONSULTANTS**

 Carter Engineering Consultants, Inc.
3651 Mars Hill Road, Suite 2000
Watkinsville, GA 30677
P: 770.725.1200
F: 770.725.1204
www.carterengineering.net

ROUNDABOUT PLANS
for
OCONEE COUNTY GOVERNMENT
MARS HILL RD. AND MALCOM BRIDGE RD. & STAFFIBUS ENTRANCE AND MALCOM BRIDGE RD.

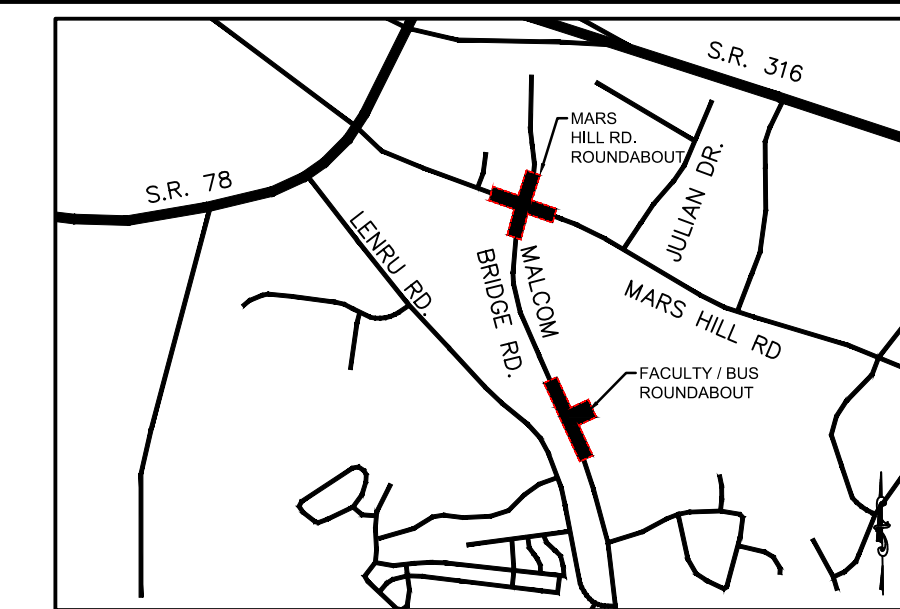
 PROJECT NAME:
**ROUNDABOUT
PLANS**

 SHEET TITLE:
**GENERAL
NOTES**

 SHEET NUMBER:
C-2.0

 PROJECT NUMBER:
18001OCG

 DATE:
04/01/19



LOCATION MAP
SCALE: N.T.S.

PROJECT NOTES:

OWNER / DEVELOPER:
Oconee County Government
23 N. Main Street
Watkinsville, Ga. 30677
Contact: Jody Woodall, PE
Tel.: (706) 769-2939

ENGINEER:
Carter Engineering Consultants, Inc.
3651 Mars Hill Road, Suite 2000
Watkinsville, Georgia 30677
Contact: Mark Campbell, PE
Tel. (770) 725-1200
Mark@carterengineering.net

Project located at Staff And Bus Entrance And Malcom Bridge Rd.

Boundary and topographical information obtained from field run survey by Carter Engineering Consultants, Inc. dated: March 21, 2019. Phone: (770) 725-1200

Contour interval is 1 foot (NAVD 88)

The project shown hereon lies with Zone X and does not lie within a 100 year flood plain according to Flood Insurance Rate Map #13219C0045D dated: September 2, 2009.

GENERAL NOTES:

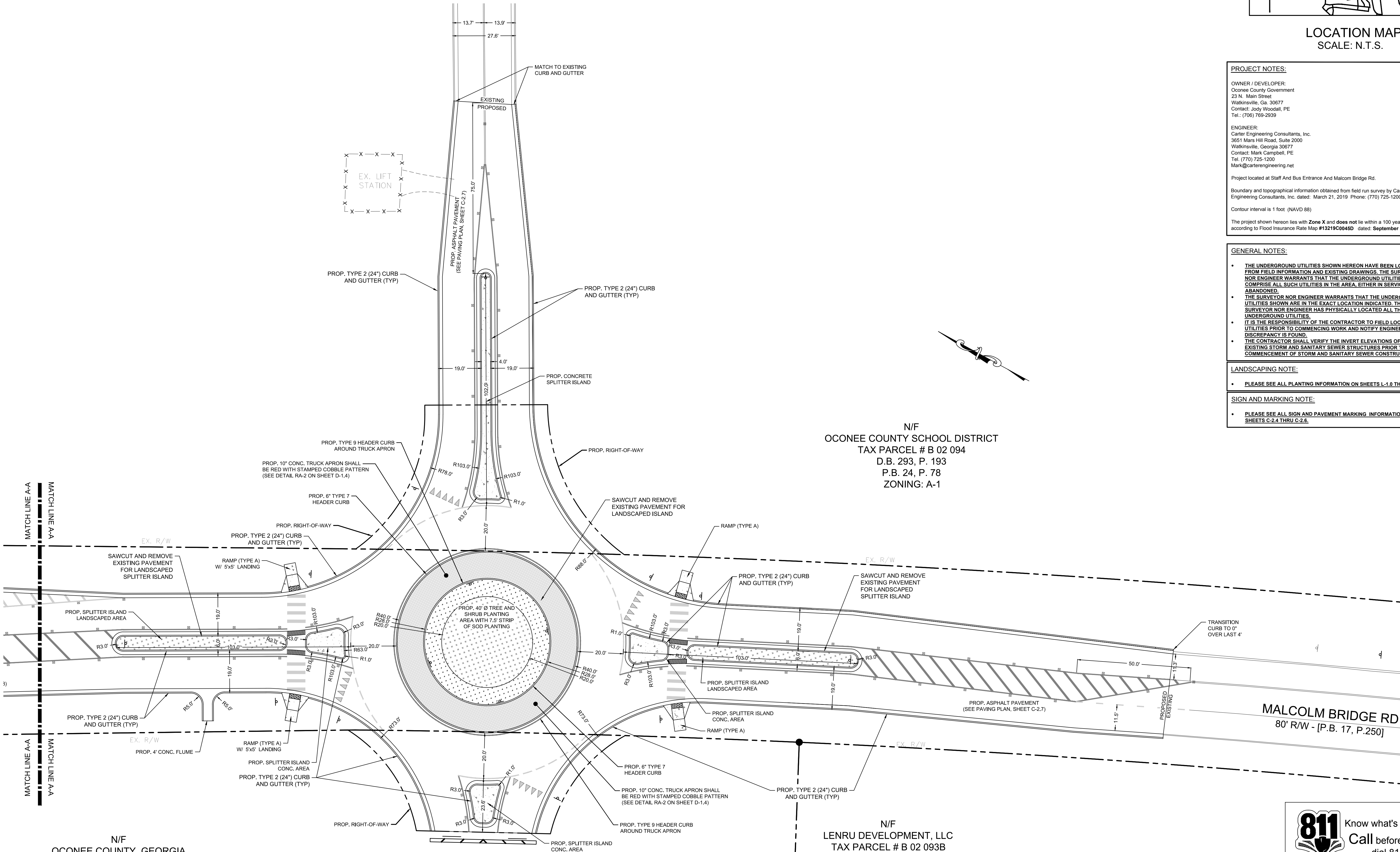
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LANDSCAPING NOTE:

- PLEASE SEE ALL PLANTING INFORMATION ON SHEETS L-1.0 THRU L-1.3.

SIGN AND MARKING NOTE:

- PLEASE SEE ALL SIGN AND PAVEMENT MARKING INFORMATION ON SHEETS C-2.4 THRU C-2.6.



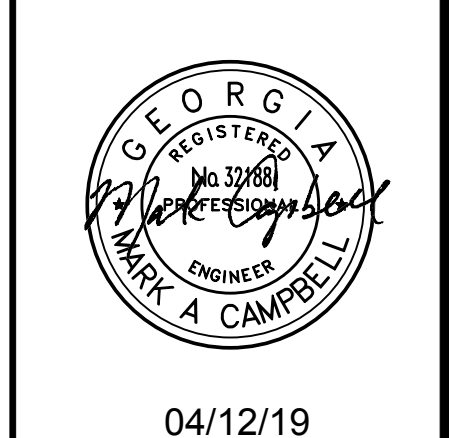
N/F
OCONEE COUNTY SCHOOL DISTRICT
TAX PARCEL # B 02 094
D.B. 293, P. 193
P.B. 24, P. 78
ZONING: A-1

N/F
LENRU DEVELOPMENT, LLC
TAX PARCEL # B 02 093B
D.B. 1141, P. 730
P.B. 17, P. 250
ZONING: R-2-MPD

N/F
OCONEE COUNTY, GEORGIA
TAX PARCEL # B 02 093BA
D.B. 720, P. 60
ZONING: R-2-MPD

811 Know what's below
Call before you dig dial 811

REVISION BLOCK	REV. #	DATE	REVISION
	A	01/19/2019	INITIAL REVIEW
	B	03/19/2019	90% SUBMITTAL
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	D	04/12/2019	CONTRACTOR BID



04/12/19

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ROUNDABOUT PLANS
for
OCONEE COUNTY GOVERNMENT
STAFF AND BUS ENTRANCE AND MALCOM BRIDGE RD.

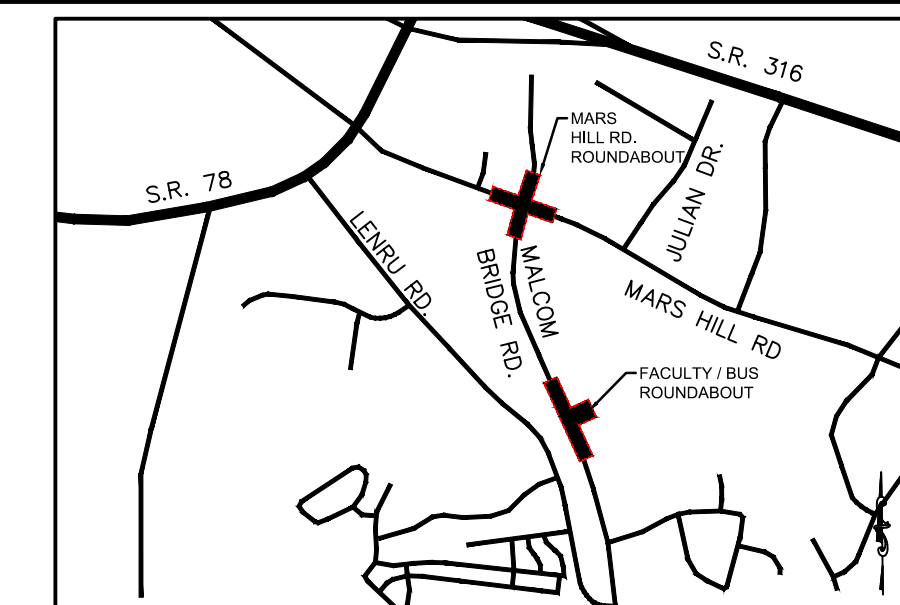
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ROUNDABOUT PLANS

SHEET TITLE:
SITE PLAN

SHEET NUMBER:
C-2.1

PROJECT NUMBER:
18001OCG

DATE:
04/01/19



LOCATION MAP
SCALE: N.T.S.

PROJECT NOTES:

OWNER / DEVELOPER:
Oconee County Government
23 N. Main Street
Watkinsville, Ga. 30677
Contact: Jody Woodall, PE
Tel.: (706) 769-2939

ENGINEER:
Carter Engineering Consultants, Inc.
3651 Mars Hill Road, Suite 2000
Watkinsville, Georgia 30677
Contact: Mark Campbell, PE
Tel. (770) 725-1200
Mark@carterengineering.net

Project located at Staff And Bus Entrance And Malcom Bridge Rd.

Boundary and topographical information obtained from field run survey by Carter Engineering Consultants, Inc. dated: March 21, 2019 Phone: (770) 725-1200

Contour interval is 1 foot (NAVD 88)

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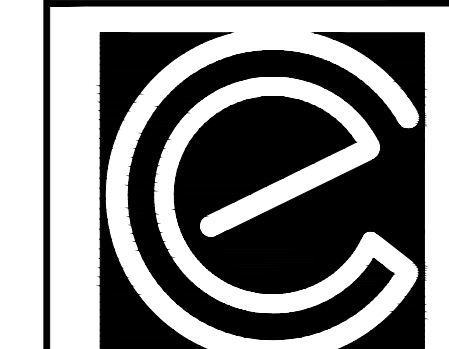
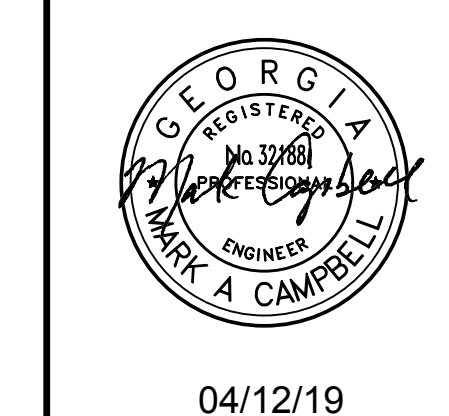
LANDSCAPING NOTE:

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SIGN AND MARKING NOTE:

- PLEASE SEE ALL SIGN AND PAVEMENT MARKING INFORMATION ON SHEETS C-2.4 THRU C-2.6.

REVISION BLOCK:	REV. #	DATE	REVISION
	A	01/19/2019	INITIAL REVIEW
	B	03/19/2019	90% SUBMITTAL
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ROUNDABOUT PLANS
for
OCONEE COUNTY GOVERNMENT
STAFF AND BUS ENTRANCE AND MALCOM BRIDGE RD.

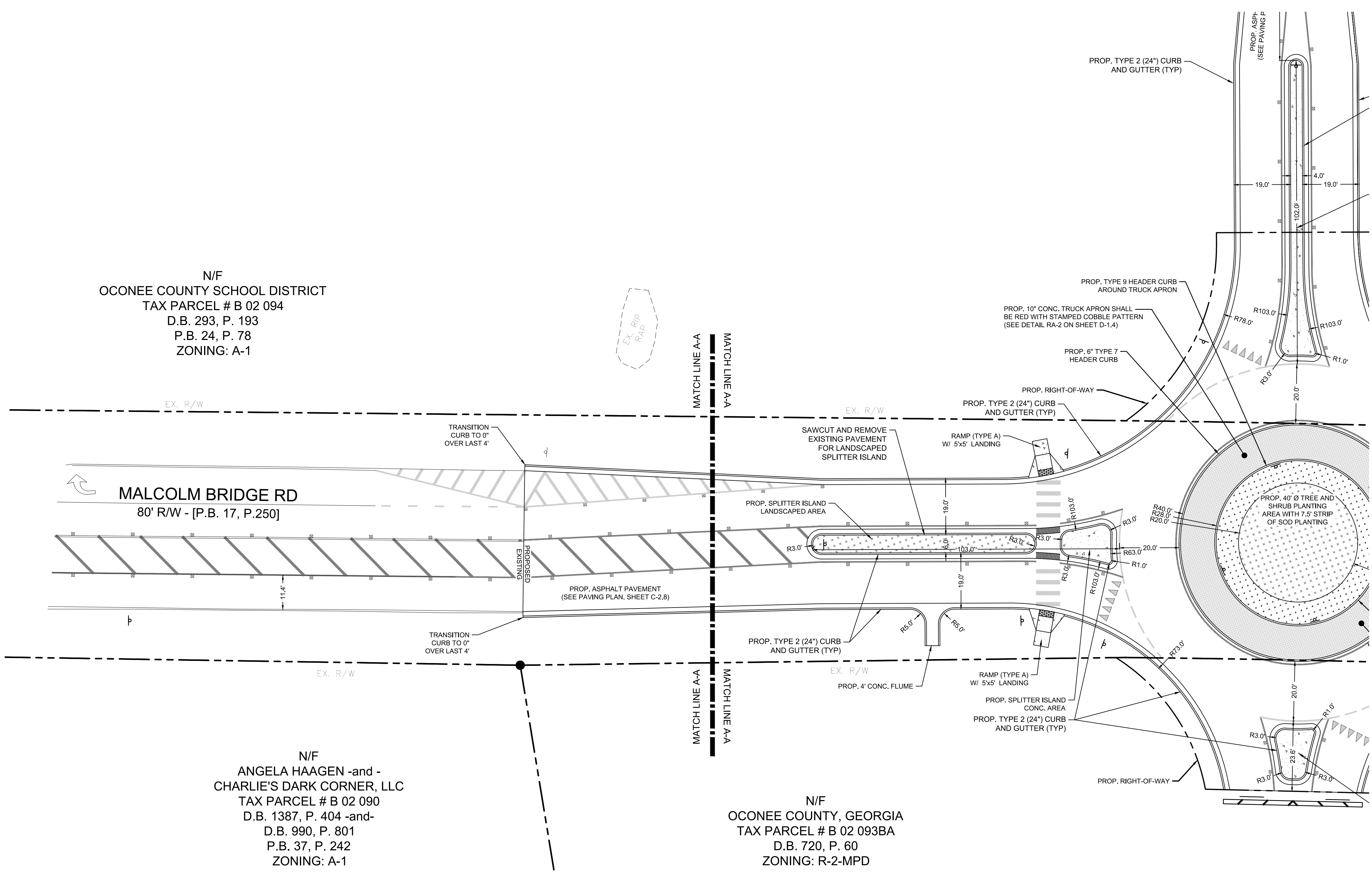
PROJECT NAME:
ROUNDABOUT PLANS

SHEET TITLE:
SITE PLAN

SHEET NUMBER:
C-2.2

PROJECT NUMBER:
18001OCG

DATE:
04/01/19



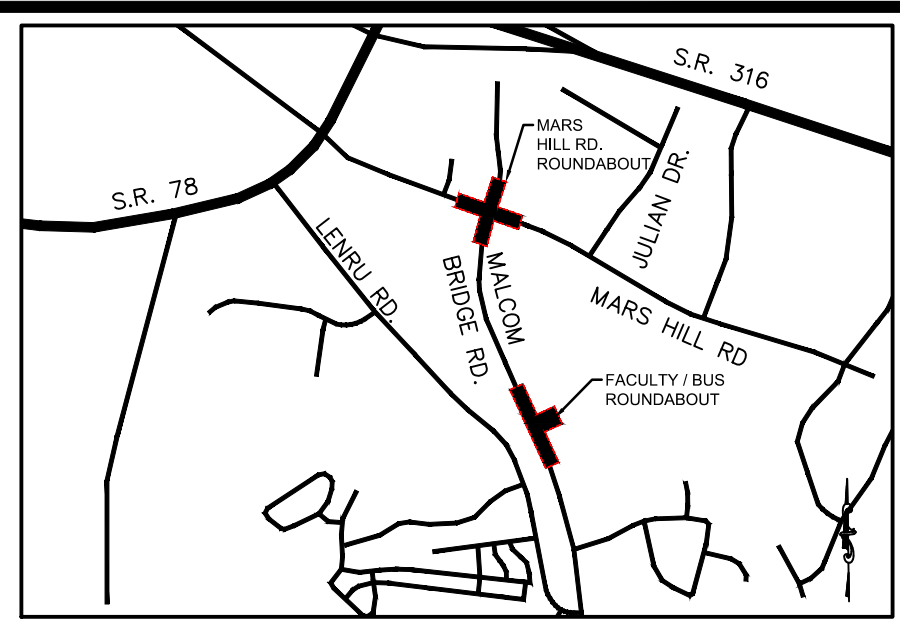
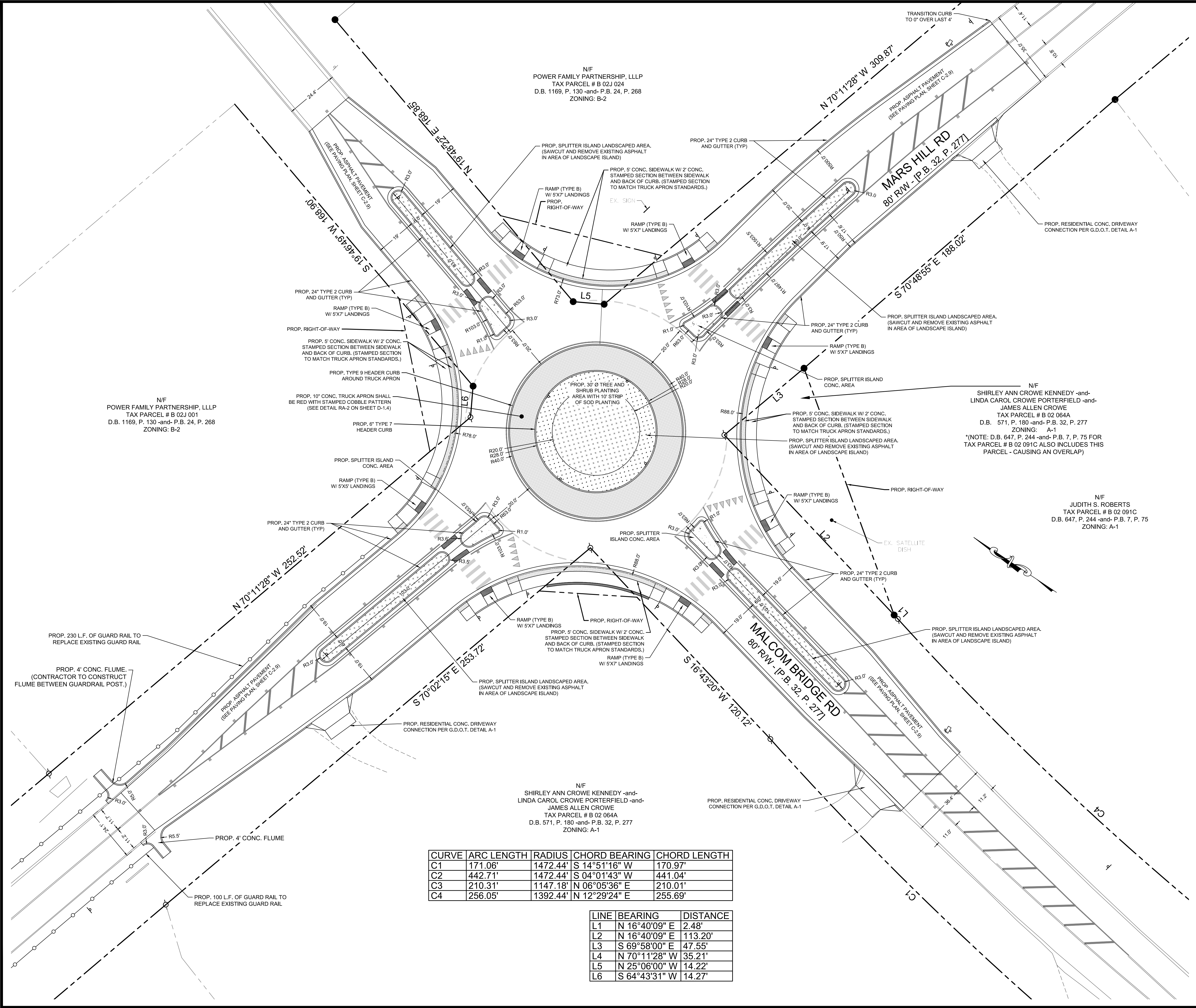
N/F
OCONEE COUNTY SCHOOL DISTRICT
TAX PARCEL # B 02 094
D.B. 293, P. 193
P.B. 24, P. 78
ZONING: A-1

N/F
ANGELA HAAGEN -and -
CHARLIE'S DARK CORNER, LLC
TAX PARCEL # B 02 090
D.B. 1387, P. 404 -and-
D.B. 990, P. 801
P.B. 37, P. 242
ZONING: A-1

N/F
OCONEE COUNTY, GEORGIA
TAX PARCEL # B 02 093BA
D.B. 720, P. 60
ZONING: R-2-MPD

811 Know what's below
Call before you dig
dial 811

GRAPHIC SCALE
SCALE 1" = 20'



LOCATION MAP
SCALE: N.T.S.

PROJECT NOTES:

OWNER / DEVELOPER:
Oconee County Government
23 N. Main Street
Watkinsville, Ga. 30677
Contact: Jody Woodall, PE
Tel.: (706) 769-2939

ENGINEER:
Carter Engineering Consultants, Inc.
3651 Mars Hill Road, Suite 2000
Watkinsville, Georgia 30677
Contact: Mark Campbell, PE
Tel. (770) 725-1200
Mark@carterengineering.net

Project located at Staff And Bus Entrance And Malcom Bridge Rd.

Boundary and topographical information obtained from field run survey by Carter Engineering Consultants, Inc. dated: March 21, 2019. Phone: (770) 725-1200

Contour interval is 1 foot (NAVD 88)

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GENERAL NOTES:

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SIGN AND MARKING NOTE:

- PLEASE SEE ALL SIGN AND PAVEMENT MARKING INFORMATION ON SHEETS C-2.4 THRU C-2.6.

N/F
POWER FAMILY PARTNERSHIP, LLLP
TAX PARCEL # B 02J 001
D.B. 1169, P. 130 -and- P.B. 24, P. 268
ZONING: B-2

N/F
POWER FAMILY PARTNERSHIP, LLLP
TAX PARCEL # B 02J 024
D.B. 1169, P. 130 -and- P.B. 24, P. 268
ZONING: B-2

N/F
SHIRLEY ANN CROWE KENNEDY -and-
LINDA CAROL CROWE PORTERFIELD -and-
JAMES ALLEN CROWE
TAX PARCEL # B 02 064A
D.B. 571, P. 180 -and- P.B. 32, P. 277
ZONING: A-1
*(NOTE: D.B. 647, P. 244 -and- P.B. 7, P. 75 FOR
TAX PARCEL # B 02 091C ALSO INCLUDES THIS
PARCEL - CAUSING AN OVERLAP)

N/F
JUDITH S. ROBERTS
TAX PARCEL # B 02 091C
D.B. 647, P. 244 -and- P.B. 7, P. 75
ZONING: A-1

N/F
SHIRLEY ANN CROWE KENNEDY -and-
LINDA CAROL CROWE PORTERFIELD -and-
JAMES ALLEN CROWE
TAX PARCEL # B 02 064A
D.B. 571, P. 180 -and- P.B. 32, P. 277
ZONING: A-1

CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	171.06'	1472.44'	S 14°51'16" W	170.97'
C2	442.71'	1472.44'	S 04°01'43" W	441.04'
C3	210.31'	1147.18'	N 06°05'36" E	210.01'
C4	256.05'	1392.44'	N 12°29'24" E	255.69'

LINE	BEARING	DISTANCE
L1	N 16°40'09" E	2.48'
L2	N 16°40'09" E	113.20'
L3	S 69°58'00" E	47.55'
L4	N 70°11'28" W	35.21'
L5	N 25°06'00" W	14.22'
L6	S 64°43'31" W	14.27'

811 Know what's below
Call before you dig
dial 811

20' 10' 0 20' 40' 60'

GRAPHIC SCALE
SCALE 1" = 20'

REVISION BLOCK:	REV. #	DATE	REVISION
	A	01/19/2019	INITIAL REVIEW
	B	03/19/2019	90% SUBMITTAL
	C	04/01/2019	ISSUE FOR REVIEW
	D	04/12/2019	CONTRACTOR BID

04/12/19

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P: 770.725.1200
F: 770.725.1204
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ROUNDABOUT PLANS
for
OCONEE COUNTY GOVERNMENT
MARS HILL ROAD INTERSECTION AND MALCOM BRIDGE RD.

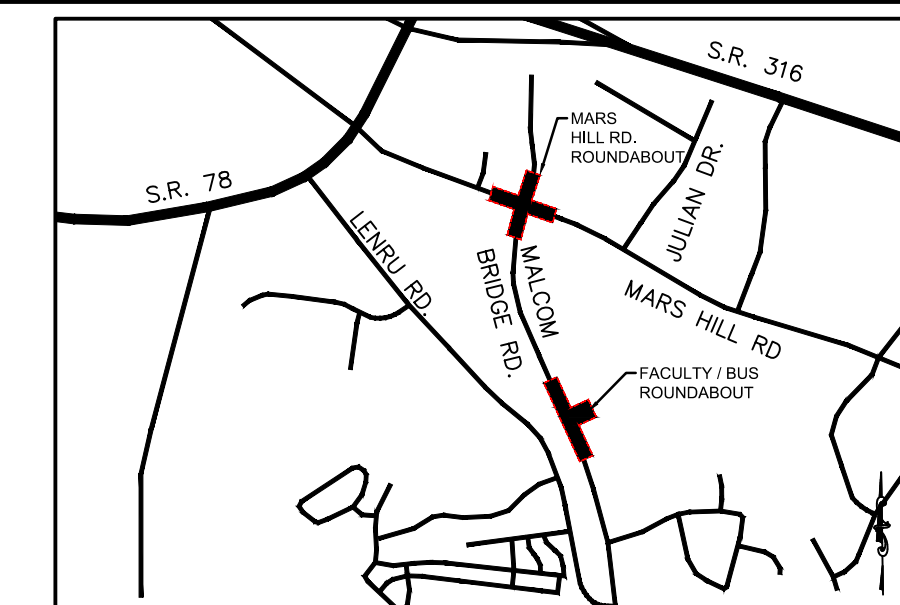
PROJECT NAME:
ROUNDABOUT PLANS

SHEET TITLE:
SITE PLAN

SHEET NUMBER:
C-2.3

PROJECT NUMBER:
18001OCG

DATE:
04/01/19



LOCATION MAP
SCALE: N.T.S.

PROJECT NOTES:

OWNER / DEVELOPER:
Oconee County Government
23 N. Main Street
Watkinsville, Ga. 30677
Contact: Jody Woodall, PE
Tel.: (706) 769-2939

ENGINEER:
Carter Engineering Consultants, Inc.
3651 Mars Hill Road, Suite 2000
Watkinsville, Georgia 30677
Contact: Mark Campbell, PE
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Project located at Staff And Bus Entrance And Malcom Bridge Rd.

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Contour interval is 1 foot (NAVD 88)

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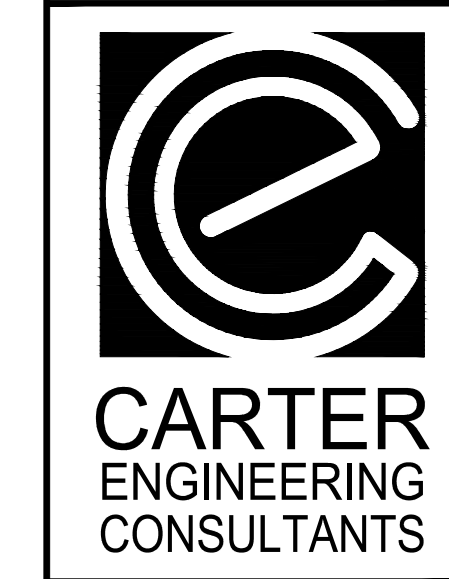
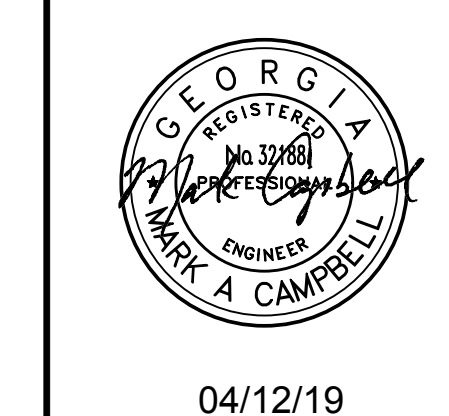
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SIGN NOTE:

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REVISION BLOCK:	REV. #	DATE	REVISION
	A	01/19/2019	INITIAL REVIEW
	B	03/19/2019	90% SUBMITTAL
	C	04/01/2019	ISSUE FOR REVIEW
	D	04/12/2019	CONTRACTOR BID



Carter Engineering Consultants, Inc.
3651 Mars Hill Road, Suite 2000
Watkinsville, GA 30677
P: 770.725.1200
F: 770.725.1204
www.carterengineering.net

ROUNDABOUT PLANS
for
OCONEE COUNTY GOVERNMENT
STAFF AND BUS ENTRANCE AND MALCOM BRIDGE RD.

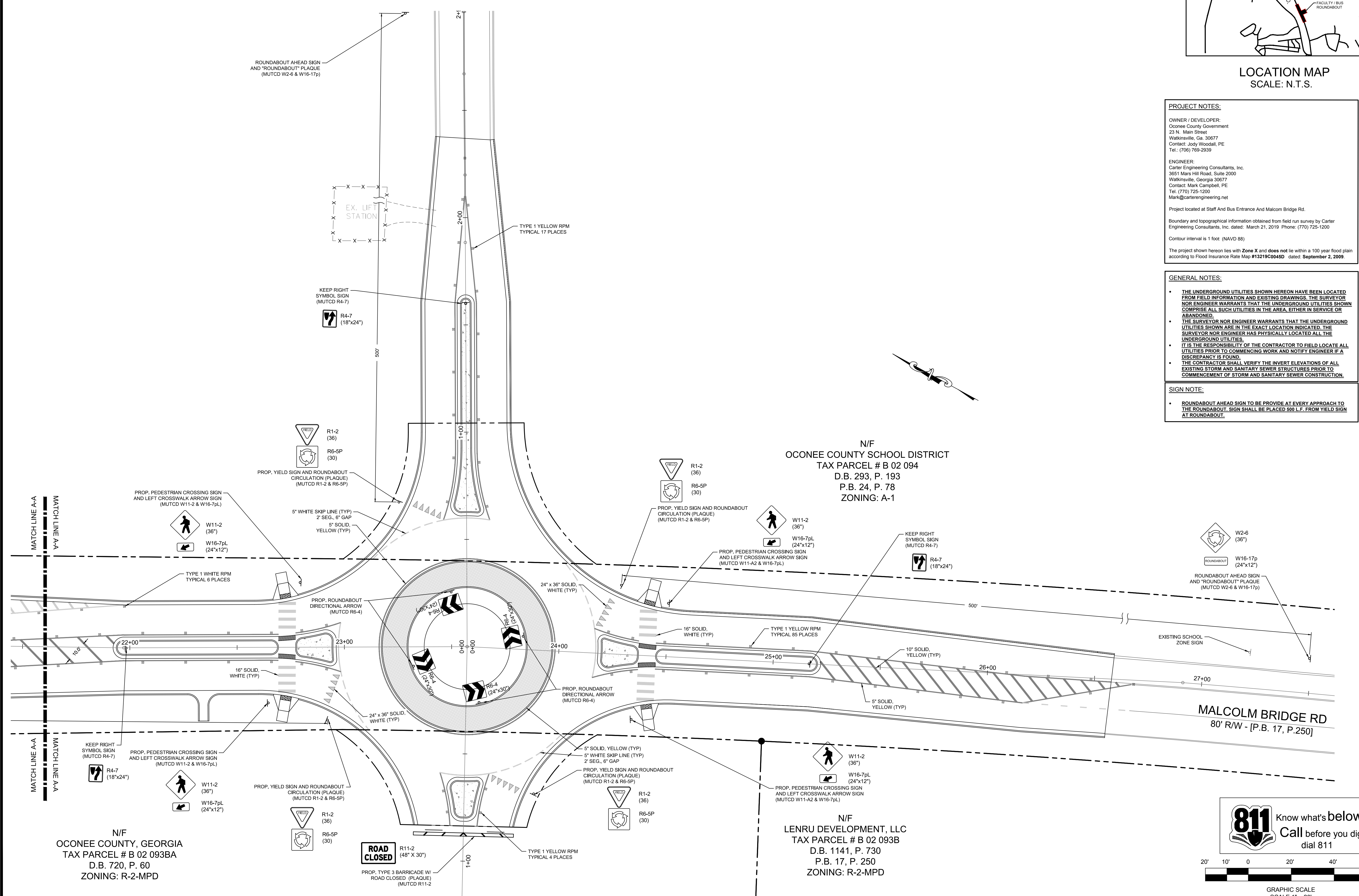
PROJECT NAME:
ROUNDABOUT PLANS

SHEET TITLE:
SIGN AND MARKING PLAN

SHEET NUMBER:
C-2.4

PROJECT NUMBER:
18001OCG

DATE:
04/01/19



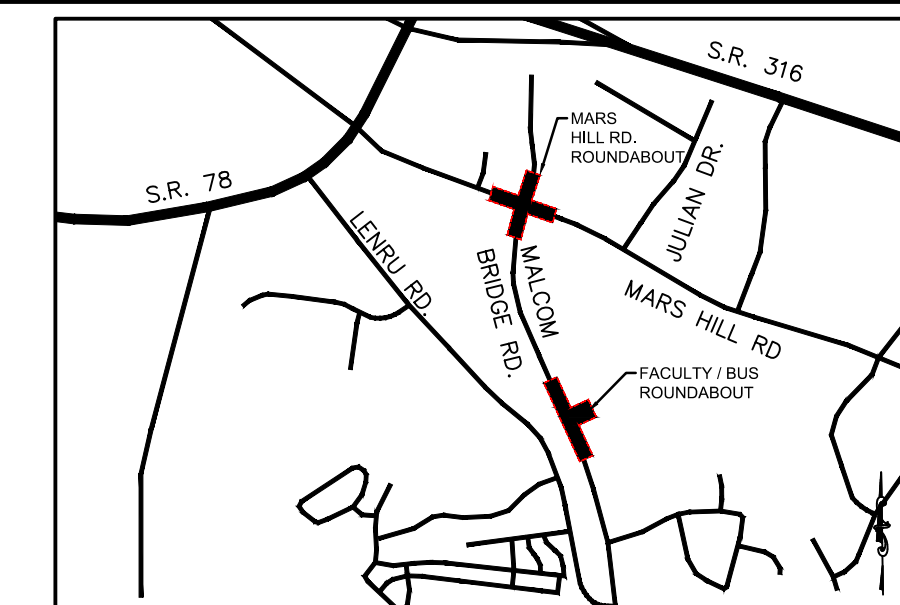
N/F
OCONEE COUNTY SCHOOL DISTRICT
TAX PARCEL # B 02 094
D.B. 293, P. 193
P.B. 24, P. 78
ZONING: A-1

N/F
LENRU DEVELOPMENT, LLC
TAX PARCEL # B 02 093B
D.B. 1141, P. 730
P.B. 17, P. 250
ZONING: R-2-MPD

N/F
OCONEE COUNTY, GEORGIA
TAX PARCEL # B 02 093BA
D.B. 720, P. 60
ZONING: R-2-MPD

811 Know what's below
Call before you dig dial 811

GRAPHIC SCALE
SCALE 1" = 20'



LOCATION MAP
SCALE: N.T.S.

PROJECT NOTES:

OWNER / DEVELOPER:
Oconee County Government
23 N. Main Street
Watkinsville, Ga. 30677
Contact: Jody Woodall, PE
Tel.: (706) 769-2939

ENGINEER:
Carter Engineering Consultants, Inc.
3651 Mars Hill Road, Suite 2000
Watkinsville, Georgia 30677
Contact: Mark Campbell, PE
Tel. (770) 725-1200
Mark@carterengineering.net

Project located at Staff And Bus Entrance And Malcom Bridge Rd.

Boundary and topographical information obtained from field run survey by Carter Engineering Consultants, Inc. dated: March 21, 2019. Phone: (770) 725-1200

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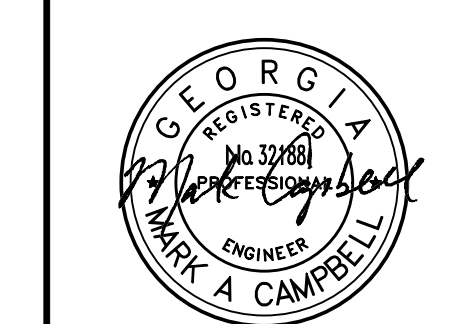
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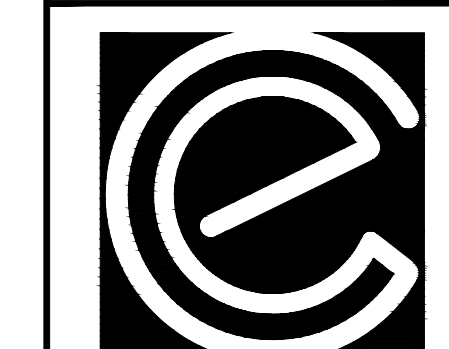
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04/12/19



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F: 770.725.1204
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ROUNDABOUT PLANS
for
OCONEE COUNTY GOVERNMENT
STAFF AND BUS ENTRANCE AND MALCOLM BRIDGE RD.

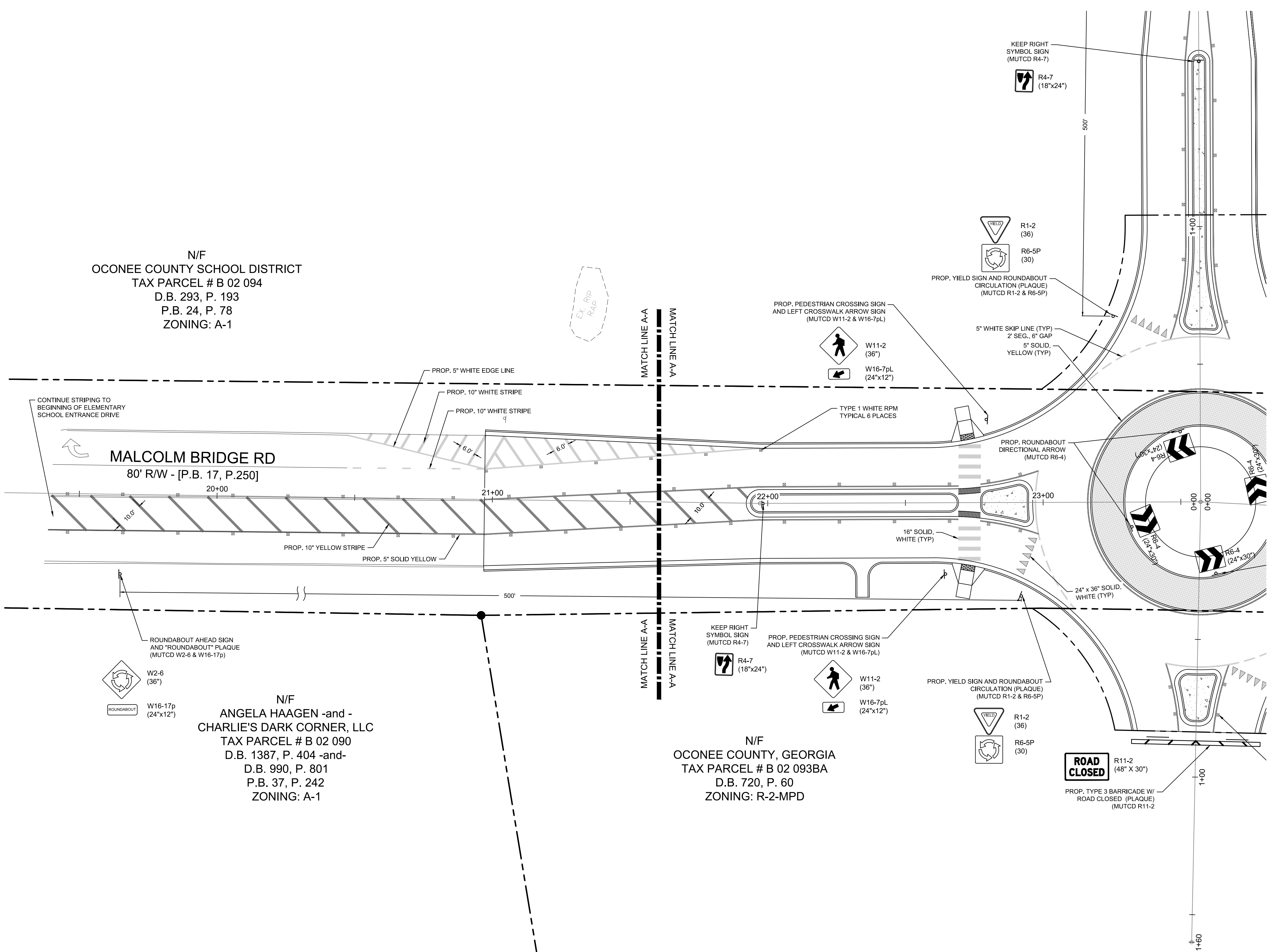
PROJECT NAME:
ROUNDABOUT PLANS

SHEET TITLE:
SIGN AND MARKING PLAN

SHEET NUMBER:
C-2.5

PROJECT NUMBER:
18001OCG

DATE:
04/01/19

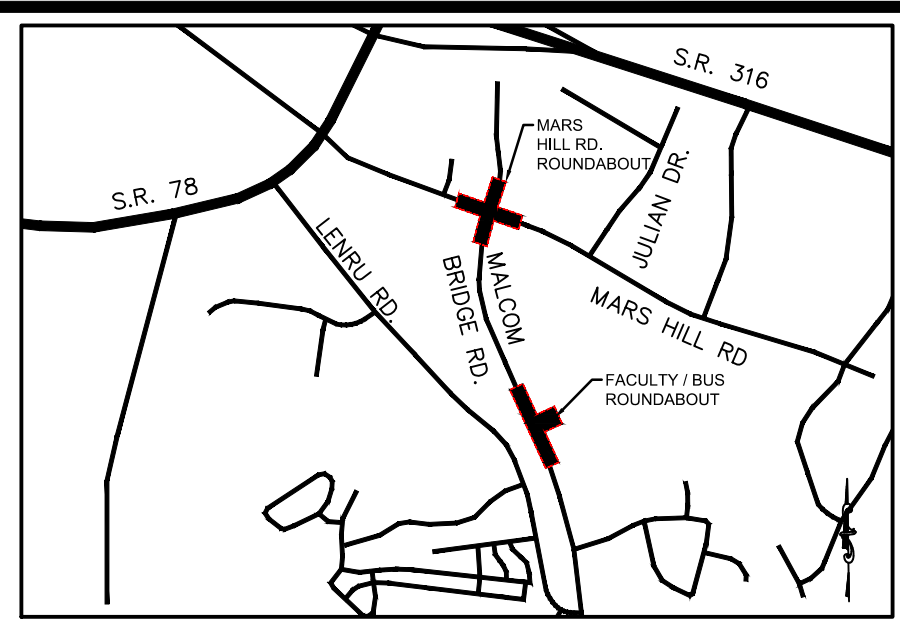
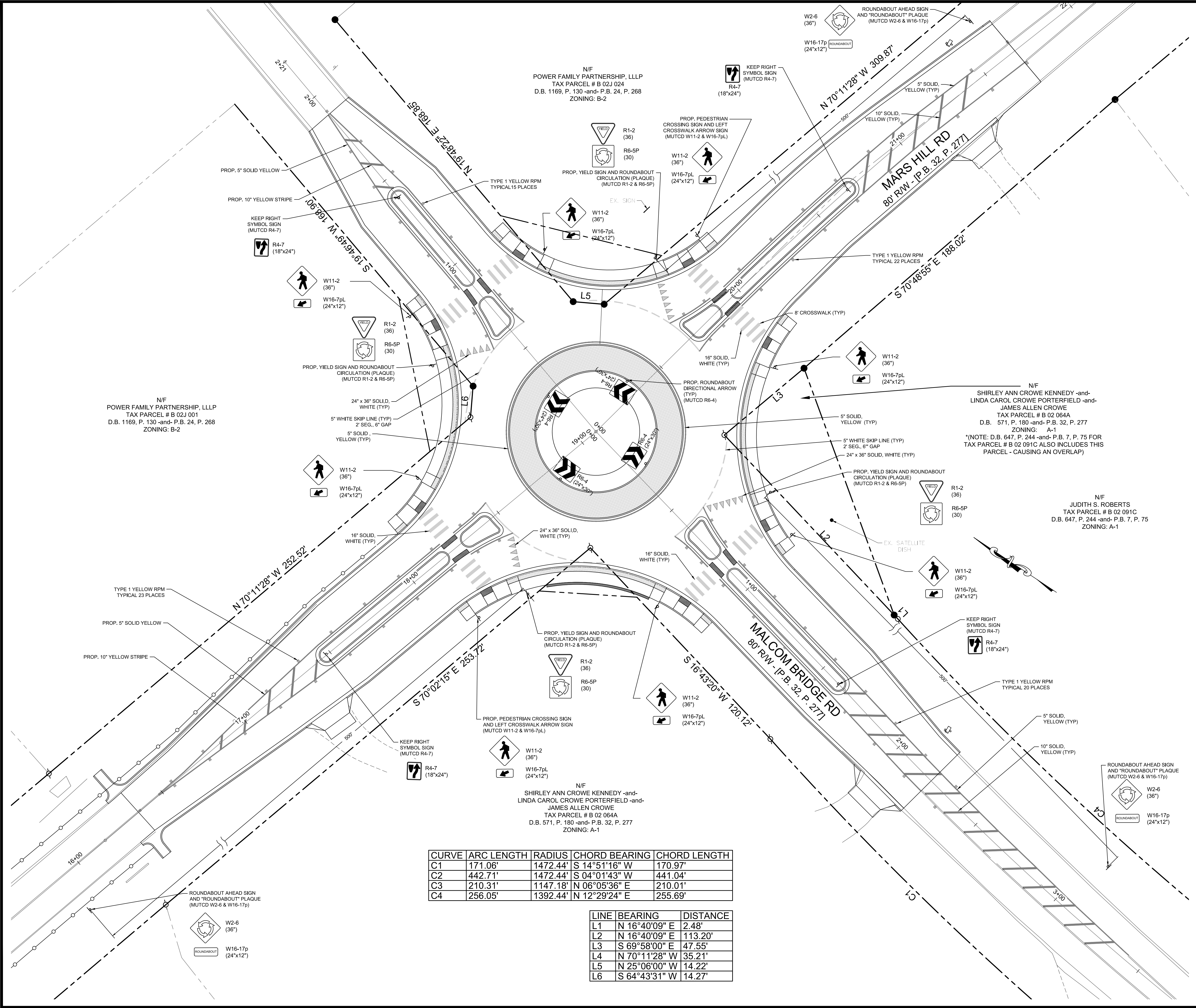


N/F
OCONEE COUNTY SCHOOL DISTRICT
TAX PARCEL # B 02 094
D.B. 293, P. 193
P.B. 24, P. 78
ZONING: A-1

MALCOLM BRIDGE RD
80' R/W - [P.B. 17, P.250]

N/F
ANGELA HAAGEN -and -
CHARLIE'S DARK CORNER, LLC
TAX PARCEL # B 02 090
D.B. 1387, P. 404 -and-
D.B. 990, P. 801
P.B. 37, P. 242
ZONING: A-1

N/F
OCONEE COUNTY, GEORGIA
TAX PARCEL # B 02 093BA
D.B. 720, P. 60
ZONING: R-2-MPD



PROJECT NOTES:

OWNER / DEVELOPER:
Oconee County Government
23 N. Main Street
Watkinsville, Ga. 30677
Contact: Jody Woodall, PE
Tel: (706) 769-2939

ENGINEER:
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Watkinsville, Georgia 30677
Contact: Mark Campbell, PE
Tel: (770) 725-1200
Mark@carterengineering.net

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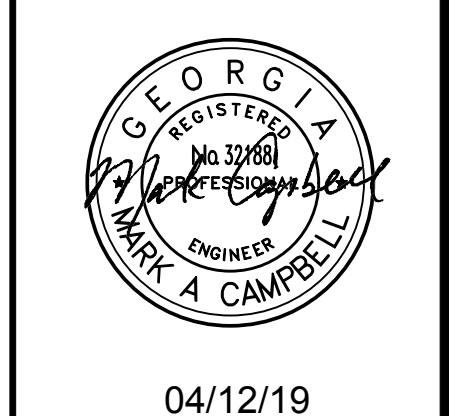
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ROUNDABOUT PLANS
for
OCONEE COUNTY GOVERNMENT
MARS HILL ROAD INTERSECTION AND MALCOM BRIDGE RD.

PROJECT NAME:
ROUNDABOUT PLANS

SHEET TITLE:
SIGN AND MARKING PLAN

SHEET NUMBER:
C-2.6

PROJECT NUMBER:
18001OCG

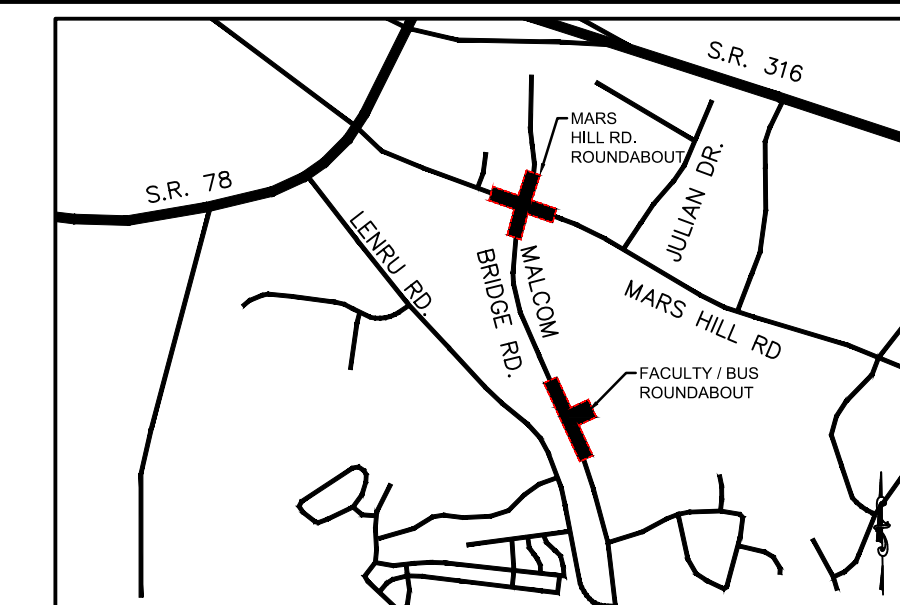
DATE:
04/01/19

CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	171.06'	1472.44'	S 14°51'16" W	170.97'
C2	442.71'	1472.44'	S 04°01'43" W	441.04'
C3	210.31'	1147.18'	N 06°05'36" E	210.01'
C4	256.05'	1392.44'	N 12°29'24" E	255.69'

LINE	BEARING	DISTANCE
L1	N 16°40'09" E	2.48'
L2	N 16°40'09" E	113.20'
L3	S 69°58'00" E	47.55'
L4	N 70°11'28" W	35.21'
L5	N 25°06'00" W	14.22'
L6	S 64°43'31" W	14.27'

811 Know what's below
Call before you dig dial 811

GRAPHIC SCALE
SCALE 1" = 20'



LOCATION MAP
SCALE: N.T.S.

PROJECT NOTES:
 OWNER / DEVELOPER:
 Oconee County Government
 23 N. Main Street
 Watkinsville, Ga. 30677
 Contact: Jody Woodall, PE
 Tel.: (706) 769-2939
 ENGINEER:
 Carter Engineering Consultants, Inc.
 3651 Mars Hill Road, Suite 2000
 Watkinsville, Georgia 30677
 Contact: Mark Campbell, PE
 Tel. (770) 725-1200
 Mark@carterengineering.net
 Project located at Staff And Bus Entrance And Malcom Bridge Rd.
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LANDSCAPING NOTE:

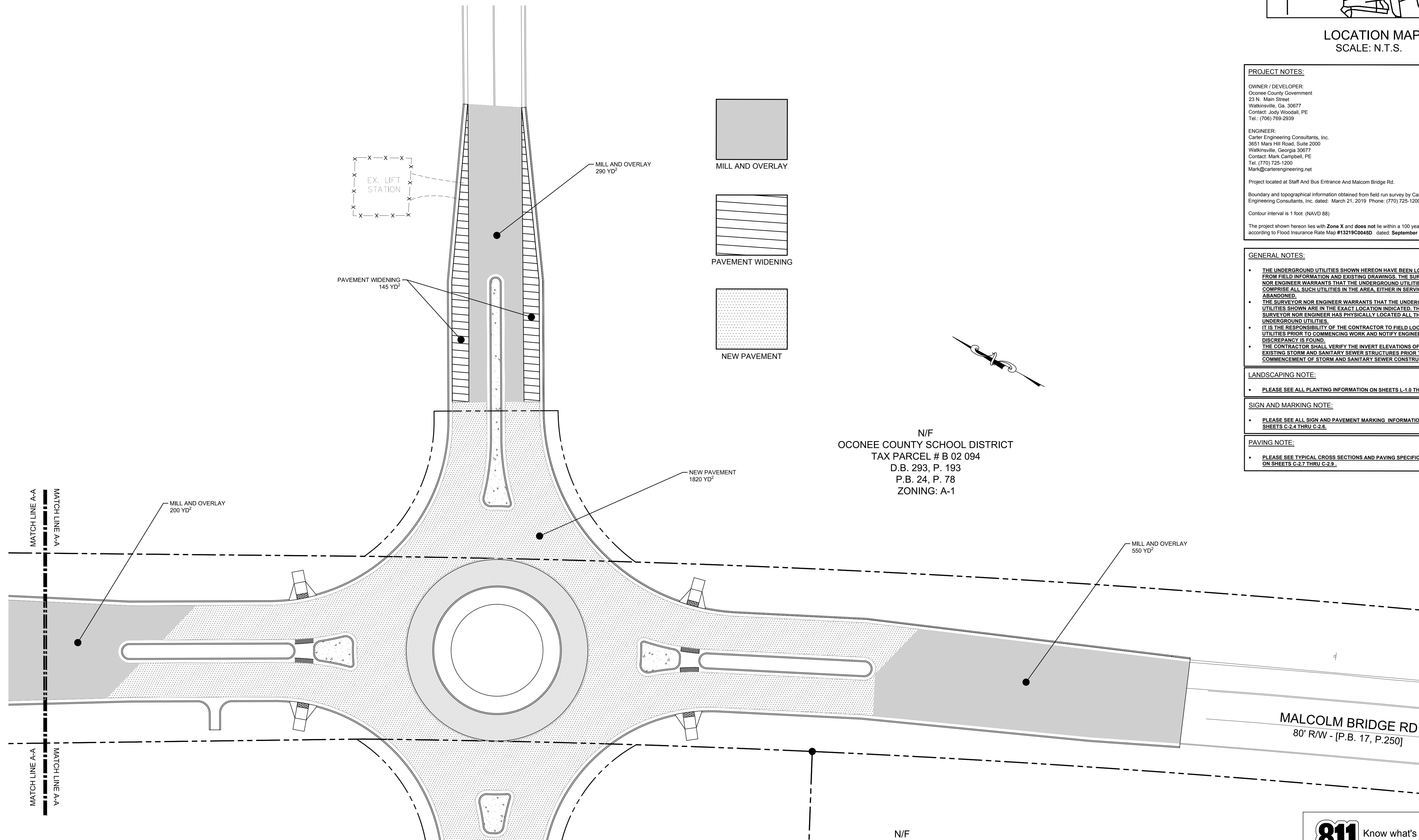
- PLEASE SEE ALL PLANTING INFORMATION ON SHEETS L-1.0 THRU L-1.3.

SIGN AND MARKING NOTE:

- PLEASE SEE ALL SIGN AND PAVEMENT MARKING INFORMATION ON SHEETS C-2.4 THRU C-2.6.

PAVING NOTE:

- PLEASE SEE TYPICAL CROSS SECTIONS AND PAVING SPECIFICATIONS ON SHEETS C-2.7 THRU C-2.9.



N/F
 OCONEE COUNTY SCHOOL DISTRICT
 TAX PARCEL # B 02 094
 D.B. 293, P. 193
 P.B. 24, P. 78
 ZONING: A-1

N/F
 OCONEE COUNTY, GEORGIA
 TAX PARCEL # B 02 093BA
 D.B. 720, P. 60
 ZONING: R-2-MPD

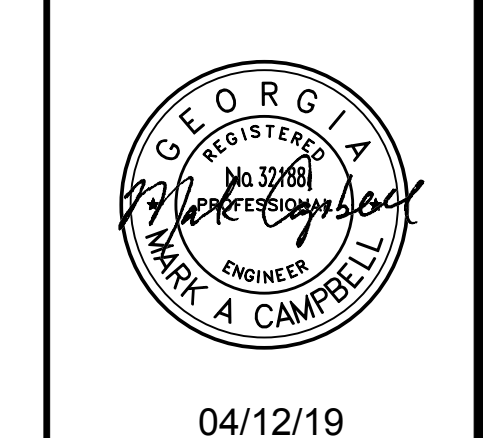
N/F
 LENRU DEVELOPMENT, LLC
 TAX PARCEL # B 02 093B
 D.B. 1141, P. 730
 P.B. 17, P. 250
 ZONING: R-2-MPD

MALCOLM BRIDGE RD
 80' R/W - [P.B. 17, P.250]

811 Know what's below
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GRAPHIC SCALE
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04/12/19

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 Watkinsville, GA 30677
 P: 770.725.1200
 F: 770.725.1204
 www.carterengineering.net

ROUNDABOUT PLANS
 for
OCONEE COUNTY GOVERNMENT
 STAFF AND BUS ENTRANCE AND MALCOM BRIDGE RD.

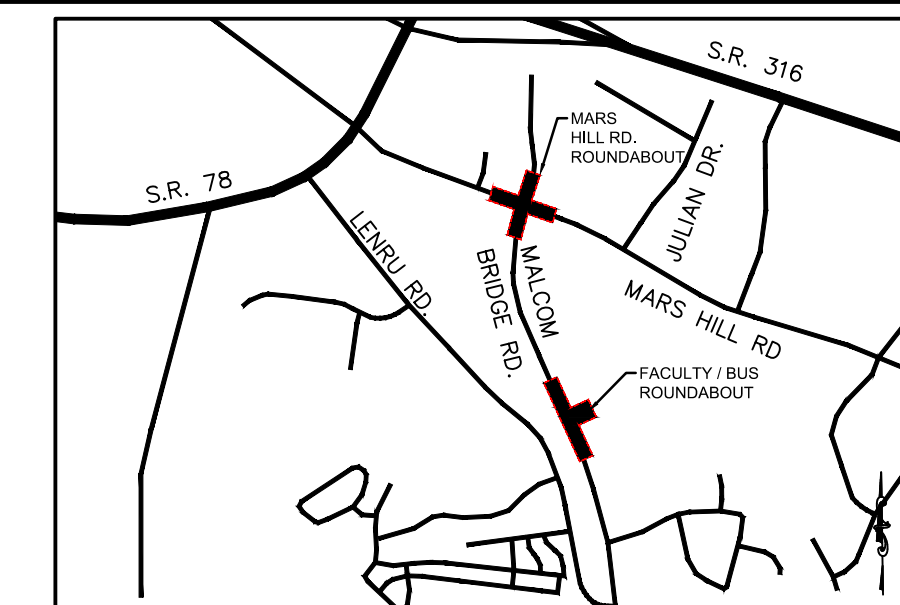
PROJECT NAME:
ROUNDABOUT PLANS

SHEET TITLE:
PAVING PLAN

SHEET NUMBER:
C-2.7

PROJECT NUMBER:
18001OCG

DATE:
04/01/19



LOCATION MAP
SCALE: N.T.S.

PROJECT NOTES:

OWNER / DEVELOPER:
Oconee County Government
23 N. Main Street
Watkinsville, Ga. 30677
Contact: Jody Woodall, PE
Tel.: (706) 769-2939

ENGINEER:
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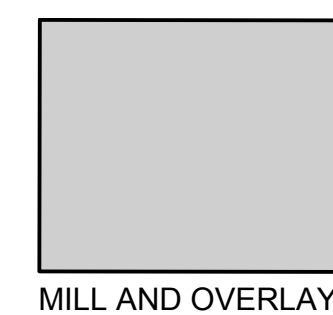
- PLEASE SEE ALL PLANTING INFORMATION ON SHEETS L-1.0 THRU L-1.3.

SIGN AND MARKING NOTE:

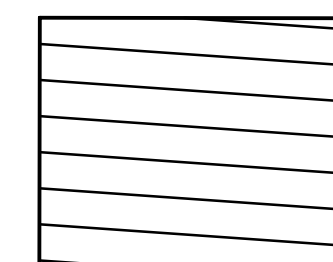
- PLEASE SEE ALL SIGN AND PAVEMENT MARKING INFORMATION ON SHEETS C-2.4 THRU C-2.6.

PAVING NOTE:

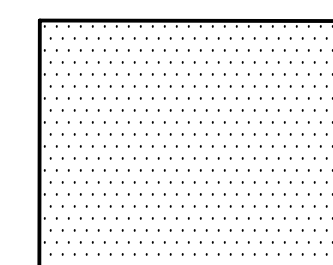
- PLEASE SEE TYPICAL CROSS SECTIONS AND PAVING SPECIFICATIONS ON SHEETS C-2.7 THRU C-2.9.



MILL AND OVERLAY



PAVEMENT WIDENING



NEW PAVEMENT

PAVEMENT WIDENING
145 YD²

MILL AND OVERLAY
320 YD²

MILL AND OVERLAY
200 YD²

N/F
OCONEE COUNTY SCHOOL DISTRICT
TAX PARCEL # B 02 094
D.B. 293, P. 193
P.B. 24, P. 78
ZONING: A-1

MALCOLM BRIDGE RD
80' R/W - [P.B. 17, P.250]

N/F
ANGELA HAAGEN -and -
CHARLIE'S DARK CORNER, LLC
TAX PARCEL # B 02 090
D.B. 1387, P. 404 -and-
D.B. 990, P. 801
P.B. 37, P. 242
ZONING: A-1

N/F
OCONEE COUNTY, GEORGIA
TAX PARCEL # B 02 093BA
D.B. 720, P. 60
ZONING: R-2-MPD

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ROUNDABOUT PLANS
for
OCONEE COUNTY GOVERNMENT
STAFF AND BUS ENTRANCE AND MALCOM BRIDGE RD.

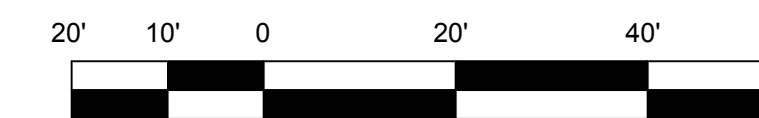
PROJECT NAME:
**ROUNDABOUT
PLANS**

SHEET TITLE:
PAVING PLAN

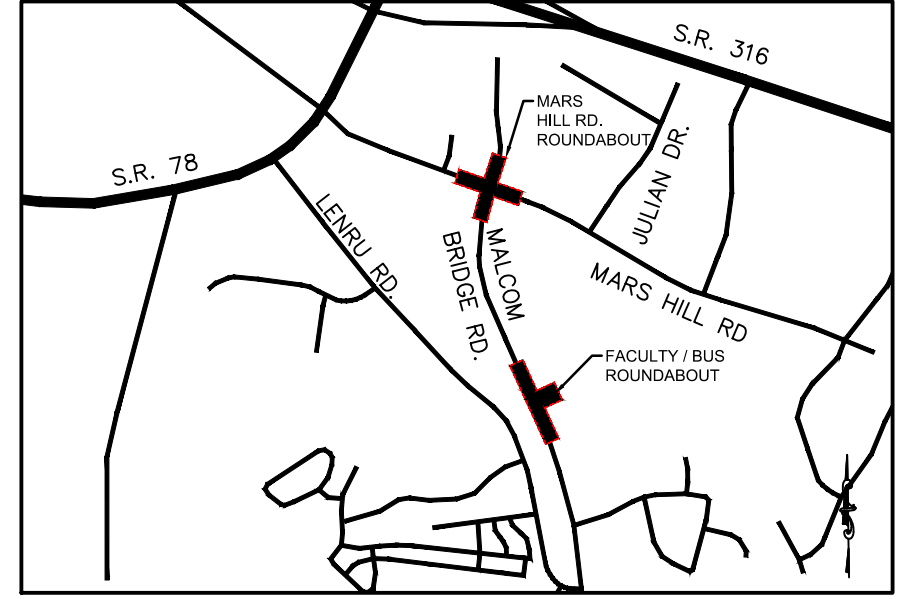
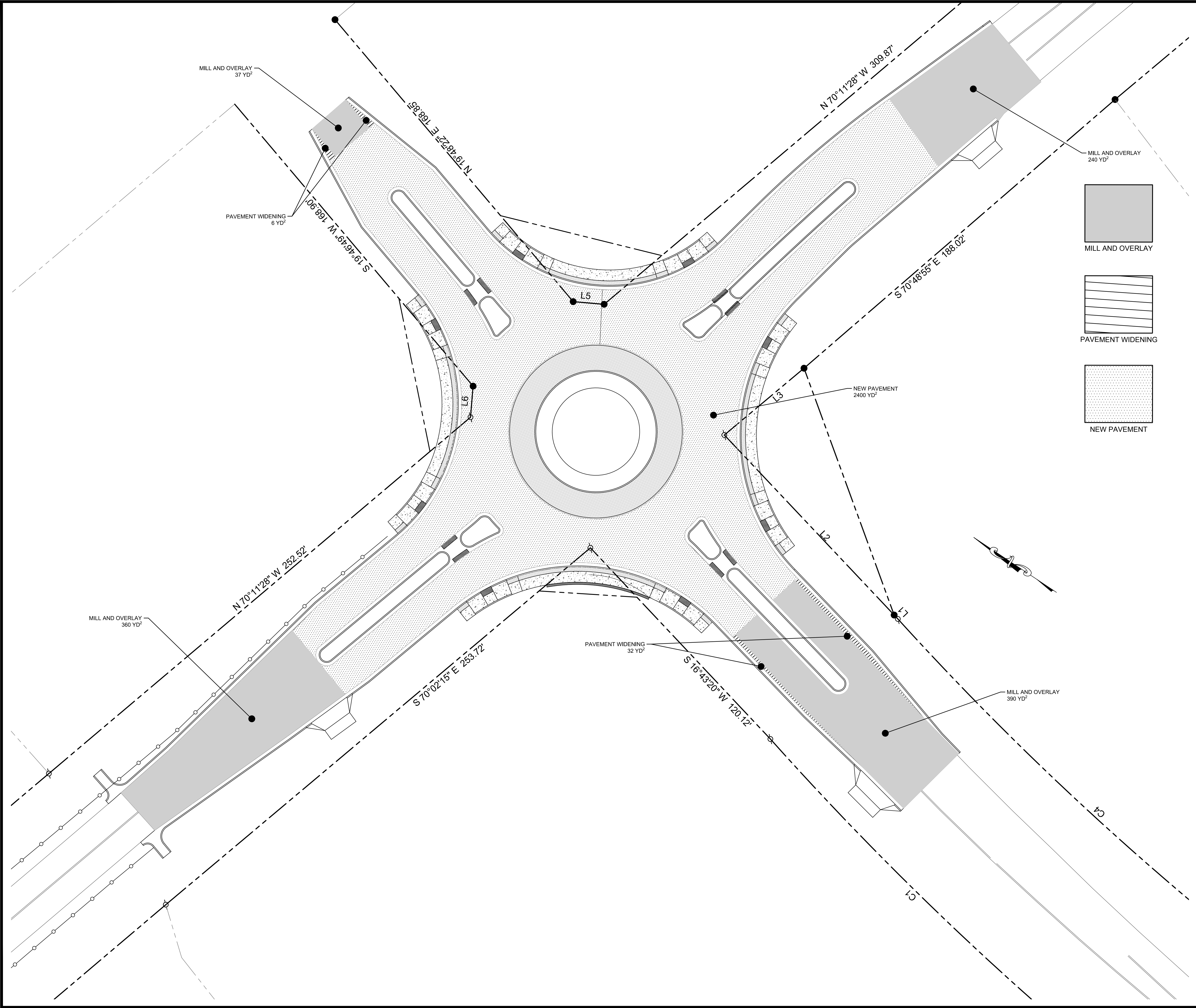
SHEET NUMBER:
C-2.8

PROJECT NUMBER:
18001OCG

DATE:
04/01/19



GRAPHIC SCALE
SCALE 1" = 20'



LOCATION MAP
SCALE: N.T.S.

PROJECT NOTES:
 OWNER / DEVELOPER:
 Oconee County Government
 23 N. Main Street
 Watkinsville, Ga. 30677
 Contact: Jody Woodall, PE
 Tel.: (706) 769-2939

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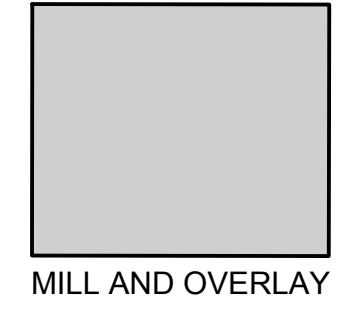
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SIGN AND MARKING NOTE:

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PAVING NOTE:

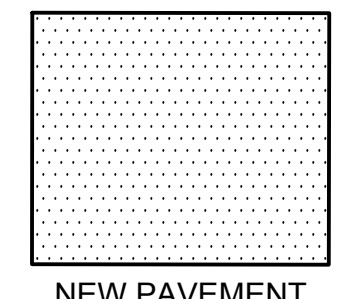
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MILL AND OVERLAY



PAVEMENT WIDENING

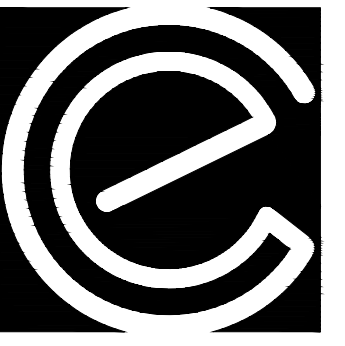


NEW PAVEMENT

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04/12/19



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ROUNDABOUT PLANS
 for
OCONEE COUNTY GOVERNMENT
 MARS HILL ROAD INTERSECTION AND MALCOM BRIDGE RD.

PROJECT NAME:
ROUNDABOUT PLANS

SHEET TITLE:
PAVING PLAN

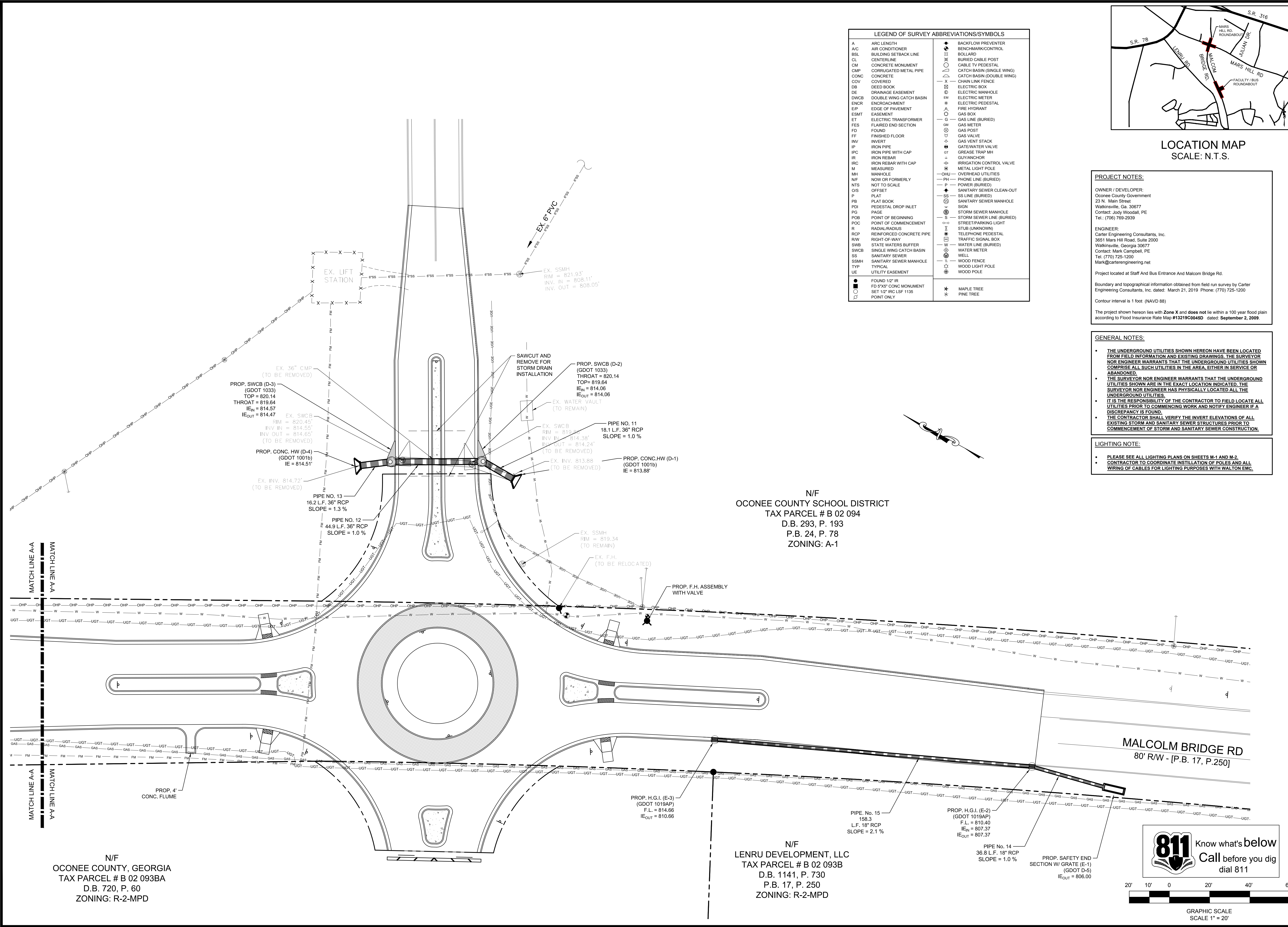
SHEET NUMBER:
C-2.9

PROJECT NUMBER:
18001OCG

DATE:
04/01/19

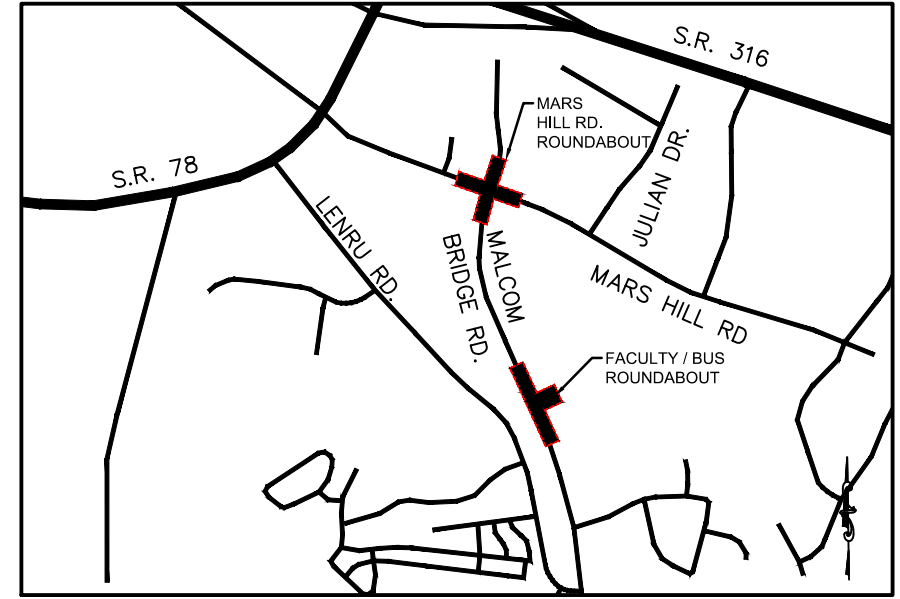


GRAPHIC SCALE
SCALE 1" = 20'



LEGEND OF SURVEY ABBREVIATIONS/SYMBOLS

A	ARC LENGTH	◆	BACKFLOW PREVENTER
A/C	AIR CONDITIONER	⊕	BENCHMARK/CONTROL
BSL	BUILDING SETBACK LINE	⊗	BOLLARD
CL	CENTERLINE	⊗	BURIED CABLE POST
CM	CONCRETE MONUMENT	⊗	CABLE TV PEDESTAL
CMP	CORRUGATED METAL PIPE	⊗	CATCH BASIN (SINGLE WING)
CONC	CONCRETE	⊗	CATCH BASIN (DOUBLE WING)
COV	COVERED	—X—	CHAIN LINK FENCE
DB	DEED BOOK	⊗	ELECTRIC BOX
DE	DRAINAGE EASEMENT	⊗	ELECTRIC MANHOLE
DWCB	DOUBLE WING CATCH BASIN	⊗	ELECTRIC METER
ENCR	ENCROACHMENT	⊗	ELECTRIC PEDESTAL
EP	EDGE OF PAVEMENT	⊗	FIRE HYDRANT
ESMT	EASEMENT	⊗	GAS BOX
ET	ELECTRIC TRANSFORMER	—G—	GAS LINE (BURIED)
FES	FLARED END SECTION	⊗	GAS METER
FD	FOUND	⊗	GAS POST
FF	FINISHED FLOOR	⊗	GAS VALVE
INV	INVERT	⊗	GAS VENT STACK
IP	IRON PIPE	⊗	GATEWATER VALVE
IJC	IRON PIPE WITH CAP	⊗	GREASE TRAP MH
IR	IRON REBAR	⊗	GUYANCHOR
IRC	IRON REBAR WITH CAP	⊗	IRRIGATION CONTROL VALVE
M	MEASURED	⊗	METAL LIGHT POLE
MH	MANHOLE	—OHU—	OVERHEAD UTILITIES
NF	NOW OR FORMERLY	—PH—	PHONE LINE (BURIED)
NTS	NOT TO SCALE	—P—	POWER (BURIED)
O/S	OFFSET	◆	SANITARY SEWER CLEAN-OUT
P	PLAT	—SS—	SS LINE (BURIED)
PB	PLAT BOOK	⊗	SANITARY SEWER MANHOLE
PDI	PEDESTAL DROP INLET	⊗	SEW
PG	PAGE	⊗	STORM SEWER MANHOLE
POB	POINT OF BEGINNING	—S—	STORM SEWER LINE (BURIED)
POC	POINT OF COMMENCEMENT	⊗	STREET/PARKING LIGHT
R	RADIAL/RADIUS	⊗	STUB (UNKNOWN)
RCP	REINFORCED CONCRETE PIPE	⊗	TELEPHONE PEDESTAL
R/W	RIGHT-OF-WAY	⊗	TRAFFIC SIGNAL BOX
SWB	STATE WATERS BUFFER	⊗	WATER LINE (BURIED)
SWCB	SINGLE WING CATCH BASIN	⊗	WATER METER
SS	SANITARY SEWER	⊗	WELL
SSMH	SANITARY SEWER MANHOLE	⊗	WOOD FENCE
TYP	TYPICAL	⊗	WOOD LIGHT POLE
UE	UTILITY EASEMENT	⊗	WOOD POLE
●	FOUND 1/2" IR	✱	MAPLE TREE
■	FD 5"x5" CONC MONUMENT	✱	PINE TREE
○	SET 1/2" IRC LSF 1135		
⊗	POINT ONLY		



PROJECT NOTES:

OWNER / DEVELOPER:
Oconee County Government
23 N. Main Street
Watkinsville, Ga. 30677
Contact: Jody Woodall, PE
Tel.: (706) 769-2939

ENGINEER:
Carter Engineering Consultants, Inc.
3651 Mars Hill Road, Suite 2000
Watkinsville, Georgia 30677
Contact: Mark Campbell, PE
Tel. (770) 725-1200
Mark@carterengineering.net

Project located at Staff And Bus Entrance And Malcom Bridge Rd.

Boundary and topographical information obtained from field run survey by Carter Engineering Consultants, Inc. dated: March 21, 2019 Phone: (770) 725-1200

Contour interval is 1 foot (NAVD 88)

The project shown hereon lies with Zone X and does not lie within a 100 year flood plain according to Flood Insurance Rate Map #13219C0404D dated: September 2, 2009.

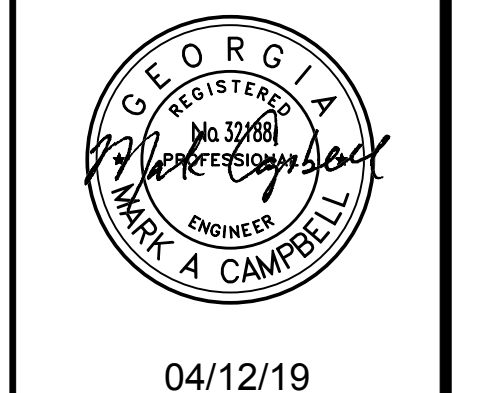
GENERAL NOTES:

- THE UNDERGROUND UTILITIES SHOWN HEREON HAVE BEEN LOCATED FROM FIELD INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR NOR ENGINEER WARRANTS THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED.
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- THE CONTRACTOR SHALL VERIFY THE INVERT ELEVATIONS OF ALL EXISTING STORM AND SANITARY SEWER STRUCTURES PRIOR TO COMMENCEMENT OF STORM AND SANITARY SEWER CONSTRUCTION.

LIGHTING NOTE:

- PLEASE SEE ALL LIGHTING PLANS ON SHEETS M-1 AND M-2.
- CONTRACTOR TO COORDINATE INSTALLATION OF POLES AND ALL WIRING OF CABLES FOR LIGHTING PURPOSES WITH WALTON EMC.

REVISION BLOCK:	REV. #	DATE	REVISION
	A	01/19/2019	INITIAL REVIEW
	B	03/19/2019	90% SUBMITTAL
	C	04/01/2019	ISSUE FOR REVIEW
	D	04/12/2019	CONTRACTOR BID



04/12/19

CARTER ENGINEERING CONSULTANTS

Carter Engineering Consultants, Inc.
3651 Mars Hill Road, Suite 2000
Watkinsville, GA 30677
P: 770.725.1200
F: 770.725.1204
www.carterengineering.net

ROUNDABOUT PLANS
for
OCONEE COUNTY GOVERNMENT
STAFF AND BUS ENTRANCE AND MALCOM BRIDGE RD.

PROJECT NAME:
ROUNDABOUT PLANS

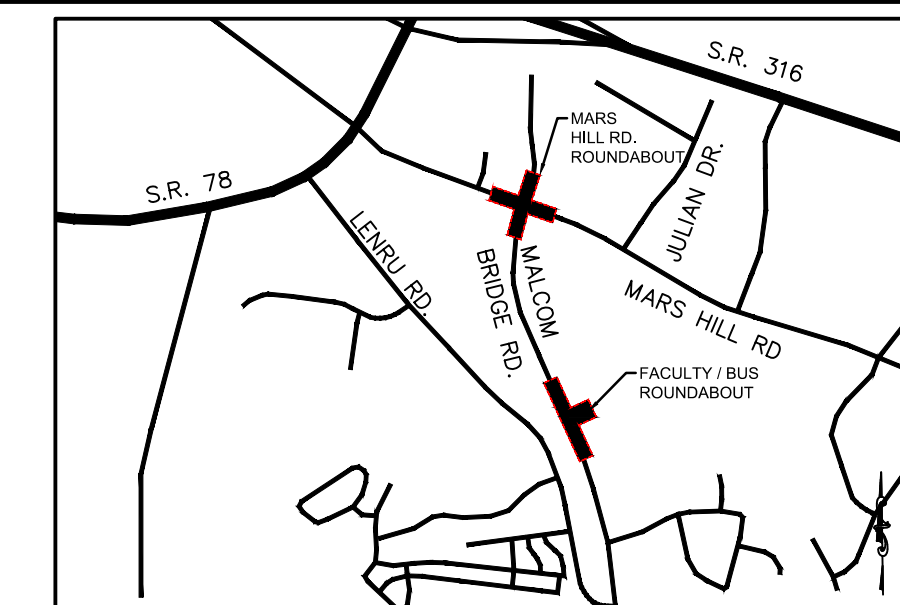
SHEET TITLE:
UTILITY PLAN

SHEET NUMBER:
C-3.0

PROJECT NUMBER:
180010CG

DATE:
04/01/19

GRAPHIC SCALE
SCALE 1" = 20'



LOCATION MAP
SCALE: N.T.S.

PROJECT NOTES:

OWNER / DEVELOPER:
Oconee County Government
23 N. Main Street
Watkinsville, Ga. 30677
Contact: Jody Woodall, PE
Tel.: (706) 769-2939

ENGINEER:
Carter Engineering Consultants, Inc.
3651 Mars Hill Road, Suite 2000
Watkinsville, Georgia 30677
Contact: Mark Campbell, PE
Tel. (770) 725-1200
Mark@carterengineering.net

Project located at Staff And Bus Entrance And Malcom Bridge Rd.

Boundary and topographical information obtained from field run survey by Carter Engineering Consultants, Inc. dated: March 21, 2019. Phone: (770) 725-1200

Contour interval is 1 foot (NAVD 88)

The project shown hereon lies with Zone X and does not lie within a 100 year flood plain according to Flood Insurance Rate Map #13219C0045D dated: September 2, 2009.

GENERAL NOTES:

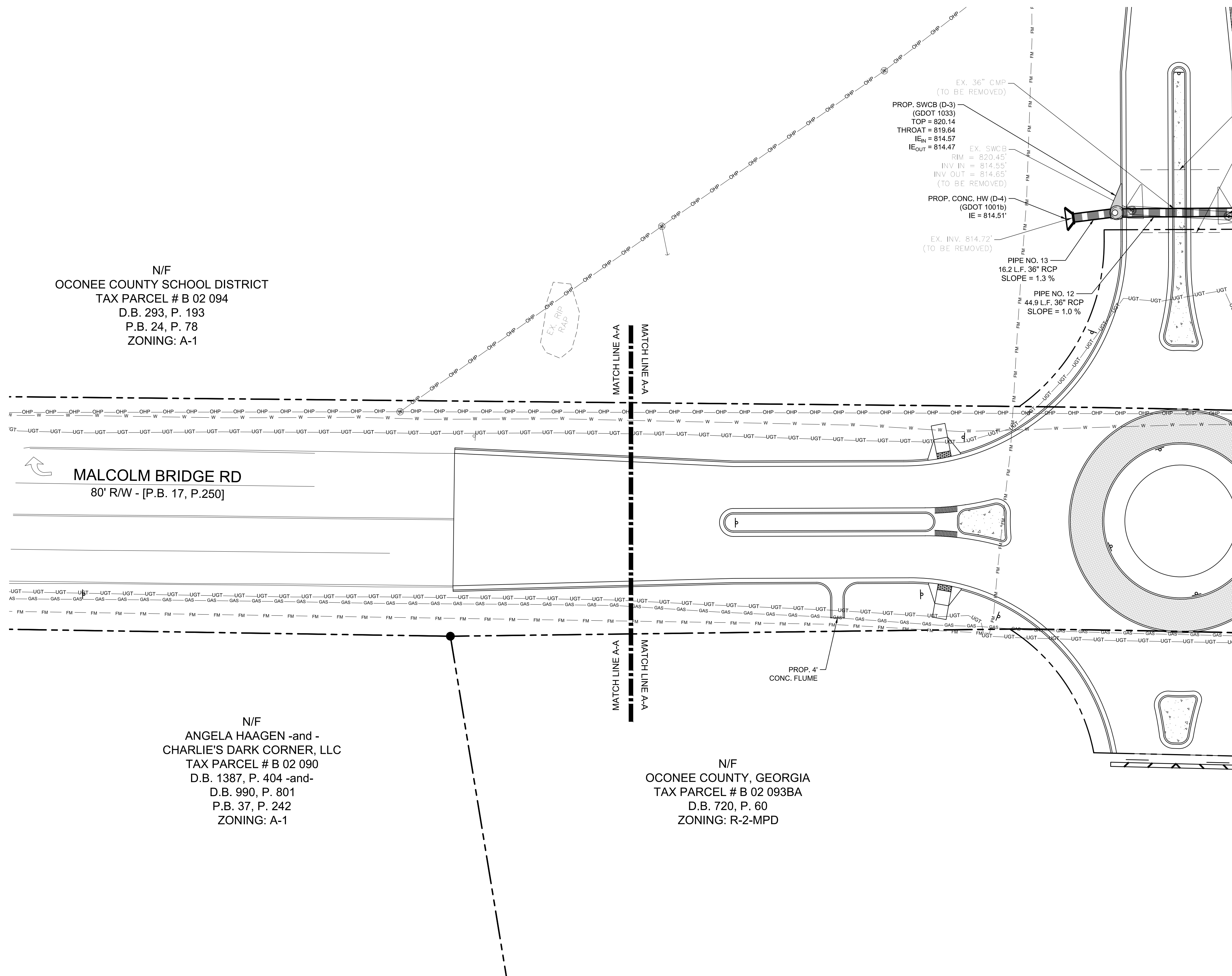
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LEGEND OF SURVEY ABBREVIATIONS/SYMBOLS

A	ARC LENGTH	◆	BACKFLOW PREVENTER
AC	AIR CONDITIONER	◆	BENCHMARK/CONTROL
BSL	BUILDING SETBACK LINE	◆	BOLLARD
CL	CENTERLINE	◆	BURIED CABLE POST
CM	CONCRETE MONUMENT	○	CABLE TV PEDESTAL
CMP	CORRUGATED METAL PIPE	○	CATCH BASIN (SINGLE WING)
CONC	CONCRETE	△	CATCH BASIN (DOUBLE WING)
COV	COVERED	— X —	CHAIN LINK FENCE
DB	DEED BOOK	□	ELECTRIC BOX
DE	DRAINAGE EASEMENT	○	ELECTRIC MANHOLE
DWCB	DOUBLE WING CATCH BASIN	EM	ELECTRIC METER
ENCR	ENCROACHMENT	*	ELECTRIC PEDESTAL
EP	EDGE OF PAVEMENT	○	FIRE HYDRANT
ESMT	EASEMENT	□	GAS BOX
ET	ELECTRIC TRANSFORMER	— G —	GAS LINE (BURIED)
FES	FLAIED END SECTION	GM	GAS METER
FD	FOUND	○	GAS POST
FF	FINISHED FLOOR	○	GAS VALVE
INV	INVERT	◆	GAS VENT STACK
IP	IRON PIPE	◆	GATE/WATER VALVE
IRC	IRON PIPE WITH CAP	○	GREASE TRAP MH
IR	IRON REBAR	◆	GUYANCHOR
IRC	IRON REBAR WITH CAP	◆	IRRIGATION CONTROL VALVE
M	MEASURED	BI	METAL LIGHT POLE
MH	MANHOLE	— OHU —	OVERHEAD UTILITIES
NIF	NOW OR FORMERLY	— PH —	PHONE LINE (BURIED)
NTS	NOT TO SCALE	— P —	POWER (BURIED)
OS	OFFSET	◆	SANITARY SEWER CLEAN-OUT
P	PLAT	— SS —	SS LINE (BURIED)
PB	PLAT BOOK	○	SANITARY SEWER MANHOLE
PBI	PEDESTAL DROP INLET	○	SIGN
PO	PAGE	— S —	STORM SEWER LINE (BURIED)
POB	POINT OF BEGINNING	— S —	STREET/PARKING LIGHT
POC	POINT OF COMMENCEMENT	○	STUB (UNDRUNN)
R	RADIAL/RADIUS	○	TELEPHONE PEDESTAL
RCP	REINFORCED CONCRETE PIPE	○	TRAFFIC SIGNAL BOX
R/W	RIGHT-OF-WAY	— W —	WATER LINE (BURIED)
SWB	STATE WATERS BUFFER	○	WATER METER
SWCB	SINGLE WING CATCH BASIN	○	WELL
SS	SANITARY SEWER	○	WOOD LIGHT POLE
SSMH	SANITARY SEWER MANHOLE	○	WOOD POLE
TYP	TYPICAL	◆	MAPLE TREE
UE	UTILITY EASEMENT	◆	PINE TREE
◆	FOUND 1/2" IR		
○	FD 8"x5" CONC MONUMENT		
○	SET 1/2" IRC LSF 1135		
○	POINT ONLY		

LIGHTING NOTE:

PLEASE SEE ALL LIGHTING PLANS ON SHEETS M-1 AND M-2.
CONTRACTOR TO COORDINATE INSTALLATION OF POLES AND ALL WIRING OF CABLES FOR LIGHTING PURPOSES WITH WALTON EMC.

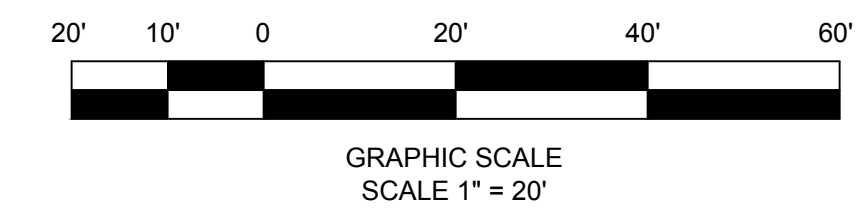


N/F
OCONEE COUNTY SCHOOL DISTRICT
TAX PARCEL # B 02 094
D.B. 293, P. 193
P.B. 24, P. 78
ZONING: A-1

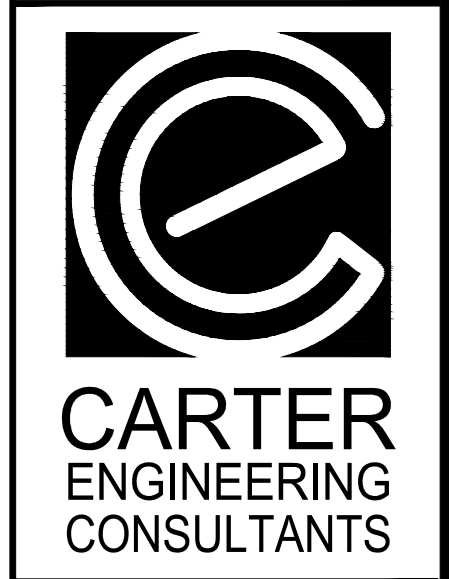
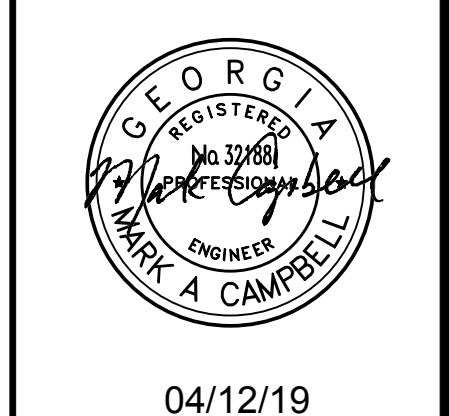
MALCOLM BRIDGE RD
80' R/W - [P.B. 17, P.250]

N/F
ANGELA HAAGEN -and -
CHARLIE'S DARK CORNER, LLC
TAX PARCEL # B 02 090
D.B. 1387, P. 404 -and-
D.B. 990, P. 801
P.B. 37, P. 242
ZONING: A-1

N/F
OCONEE COUNTY, GEORGIA
TAX PARCEL # B 02 093BA
D.B. 720, P. 60
ZONING: R-2-MPD



REVISION BLOCK:	REV. #	DATE	REVISION
	A	01/19/2019	INITIAL REVIEW
	B	03/19/2019	90% SUBMITTAL
	C	04/01/2019	ISSUE FOR REVIEW
	D	04/12/2019	CONTRACTOR BID



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F: 770.725.1204
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ROUNDABOUT PLANS
for
OCONEE COUNTY GOVERNMENT
STAFF AND BUS ENTRANCE AND MALCOLM BRIDGE RD.

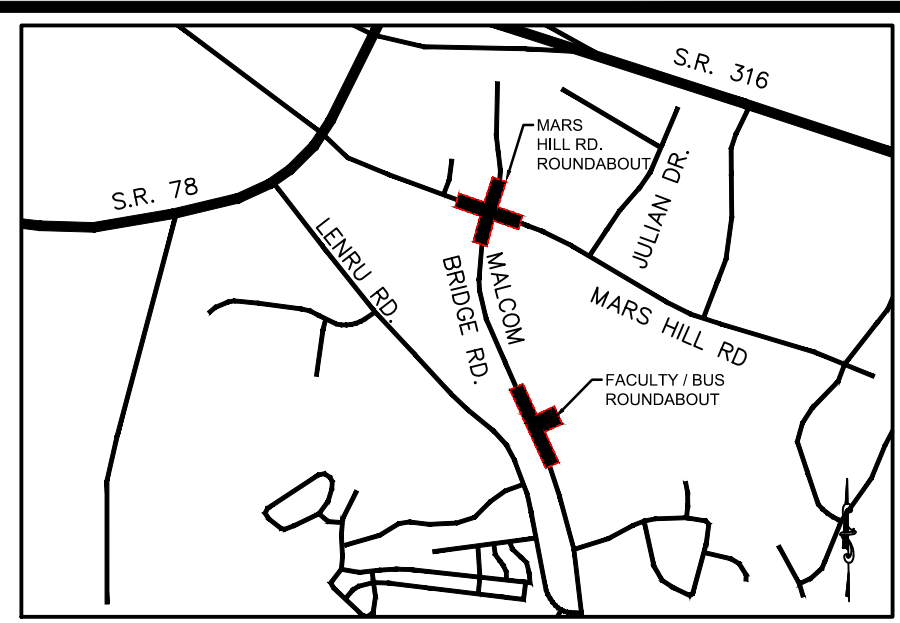
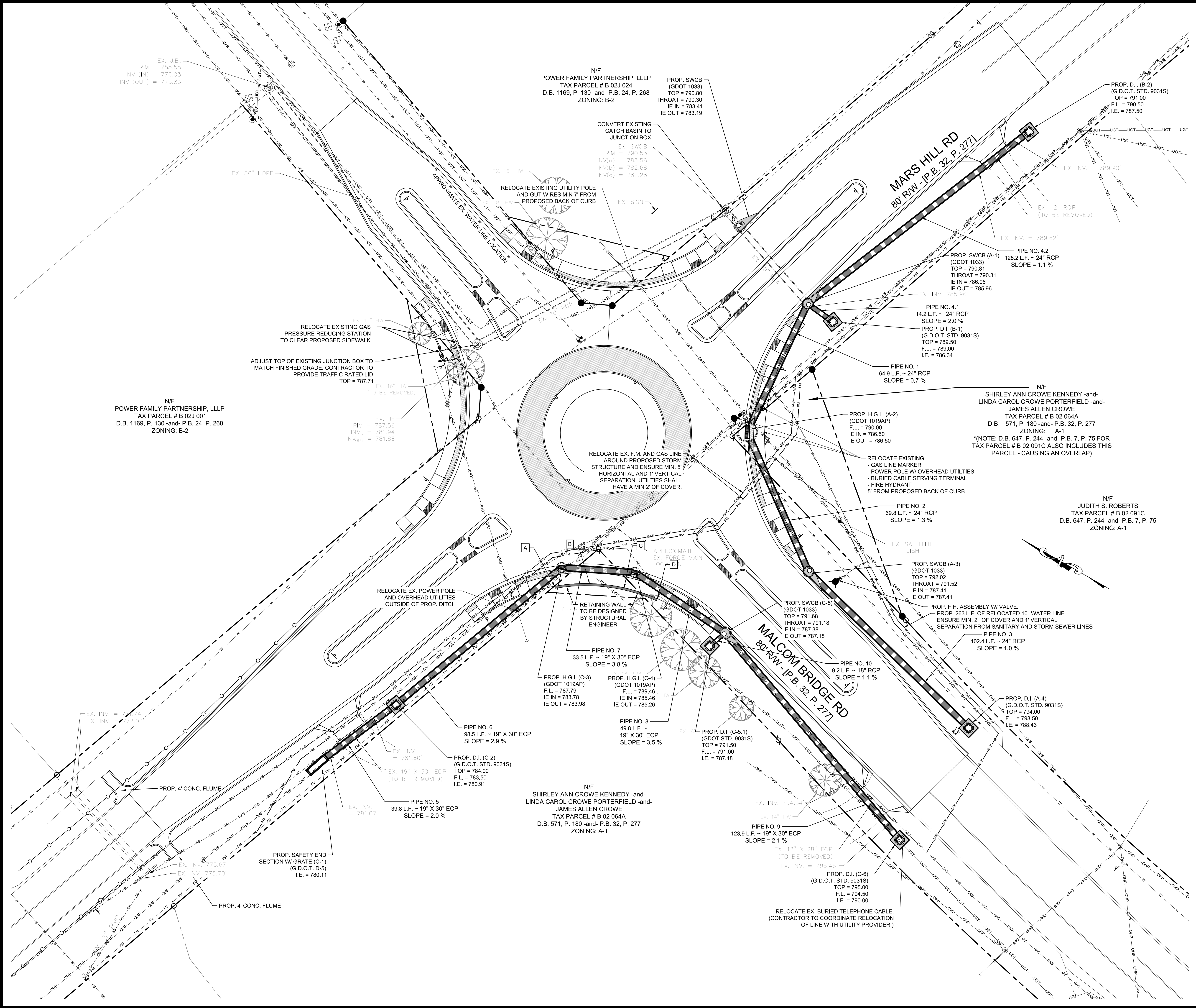
PROJECT NAME:
ROUNDABOUT PLANS

SHEET TITLE:
UTILITY PLAN

SHEET NUMBER:
C-3.1

PROJECT NUMBER:
18001OCG

DATE:
04/01/19



PROJECT NOTES:

OWNER / DEVELOPER:
Oconee County Government
23 N. Main Street
Watkinsville, Ga. 30677
Contact: Jody Woodall, PE
Tel: (706) 769-2939

ENGINEER:
Carter Engineering Consultants, Inc.
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Contact: Mark Campbell, PE
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Mark@carterengineering.net

Project located at Staff And Bus Entrance And Malcom Bridge Rd.

Boundary and topographical information obtained from field run survey by Carter Engineering Consultants, Inc. dated: March 21, 2019. Phone: (770) 725-1200

Contour interval is 1 foot (NAVD 88)

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LEGEND OF SURVEY ABBREVIATIONS/SYMBOLS

ARC LENGTH	BACKFLOW PREVENTER
AC	BENCHMARK/CONTROL
ACL	BOLLARD
BSL	BUILDING SETBACK LINE
CL	CENTERLINE
CM	CONCRETE MONUMENT
CMP	CORRUGATED METAL PIPE
CONC	CONCRETE
COV	COVERED
DB	DEED BOOK
DE	DRAINAGE EASEMENT
DWCBC	DOUBLE WING CATCH BASIN
ENCR	ENCROACHMENT
EIP	EDGE OF PAVEMENT
ESMT	EASEMENT
ET	ELECTRIC TRANSFORMER
FES	FLAIED END SECTION
FD	FOUND
FF	FINISHED FLOOR
INV	INVERT
IP	IRON PIPE
IPC	IRON PIPE WITH CAP
IR	IRON REBAR
IRC	IRON REBAR WITH CAP
M	MEASURED
MH	MANHOLE
NH	NOW OR FORMERLY
NTS	NOT TO SCALE
OS	OFFSET
PLAT	PLAT
PB	PLAT BOOK
POI	PEDESTAL DROP INLET
PAGE	PAGE
POB	POINT OF BEGINNING
POC	POINT OF COMMENCEMENT
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RTW	RIGHT-OF-WAY
SWB	STATE WATERS BUFFER
SWCB	SINGLE WING CATCH BASIN
SS	SANITARY SEWER
SSMH	SANITARY SEWER MANHOLE
TYP	TYPICAL
U/E	UTILITY EASEMENT
FOUND 1/2" IR	FOUND 1/2" IR
SET 1/2" IR LSF 1135	SET 1/2" IR LSF 1135
POINT ONLY	POINT ONLY
BACKFLOW PREVENTER	BACKFLOW PREVENTER
BENCHMARK/CONTROL	BENCHMARK/CONTROL
BOLLARD	BOLLARD
BURIED CABLE POST	BURIED CABLE POST
CABLE TV PEDESTAL	CABLE TV PEDESTAL
CATCH BASIN (SINGLE WING)	CATCH BASIN (SINGLE WING)
CATCH BASIN (DOUBLE WING)	CATCH BASIN (DOUBLE WING)
CHAIN LINK FENCE	CHAIN LINK FENCE
ELECTRIC BOX	ELECTRIC BOX
ELECTRIC MANHOLE	ELECTRIC MANHOLE
ELECTRIC METER	ELECTRIC METER
ELECTRIC PEDESTAL	ELECTRIC PEDESTAL
FIRE HYDRANT	FIRE HYDRANT
GAS BOX	GAS BOX
GAS LINE (BURIED)	GAS LINE (BURIED)
GAS METER	GAS METER
GAS POST	GAS POST
GAS VALVE	GAS VALVE
GAS VENT STACK	GAS VENT STACK
GATEWATER VALVE	GATEWATER VALVE
GREASE TRAP MH	GREASE TRAP MH
GUY/ANCHOR	GUY/ANCHOR
IRRIGATION CONTROL VALVE	IRRIGATION CONTROL VALVE
METAL LIGHT POLE	METAL LIGHT POLE
OVERHEAD UTILITIES	OVERHEAD UTILITIES
PHONE LINE (BURIED)	PHONE LINE (BURIED)
POWER (BURIED)	POWER (BURIED)
SANITARY SEWER CLEAN-OUT	SANITARY SEWER CLEAN-OUT
SS LINE (BURIED)	SS LINE (BURIED)
SANITARY SEWER MANHOLE	SANITARY SEWER MANHOLE
SIGN	SIGN
STORM SEWER MANHOLE	STORM SEWER MANHOLE
STORM SEWER LINE (BURIED)	STORM SEWER LINE (BURIED)
STREET/PARKING LIGHT	STREET/PARKING LIGHT
STUB (UNKNOWN)	STUB (UNKNOWN)
TELEPHONE PEDESTAL	TELEPHONE PEDESTAL
TRAFFIC SIGNAL BOX	TRAFFIC SIGNAL BOX
WATER LINE (BURIED)	WATER LINE (BURIED)
WATER METER	WATER METER
WELL	WELL
WOOD FENCE	WOOD FENCE
WOOD LIGHT POLE	WOOD LIGHT POLE
WOOD POLE	WOOD POLE
MAPLE TREE	MAPLE TREE
PINE TREE	PINE TREE

LIGHTING NOTE:

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REVISION BLOCK:

REV #	DATE	REVISION
A	01/19/2019	INITIAL REVIEW
B	03/19/2019	90% SUBMITTAL
C	04/01/2019	ISSUE FOR REVIEW
D	04/12/2019	CONTRACTOR BID

REGISTERED PROFESSIONAL ENGINEER

MARK A. CAMPBELL
 ENGINEER

04/12/19

CARTER ENGINEERING CONSULTANTS

Carter Engineering Consultants, Inc.
3651 Mars Hill Road, Suite 2000
Watkinsville, GA 30677
P: 770.725.1200
F: 770.725.1204
www.carterengineering.net

ROUNDABOUT PLANS
for
OCONEE COUNTY GOVERNMENT
MARS HILL ROAD INTERSECTION AND MALCOM BRIDGE RD.

PROJECT NAME:
ROUNDABOUT PLANS

SHEET TITLE:
UTILITY PLAN

SHEET NUMBER:
C-3.2

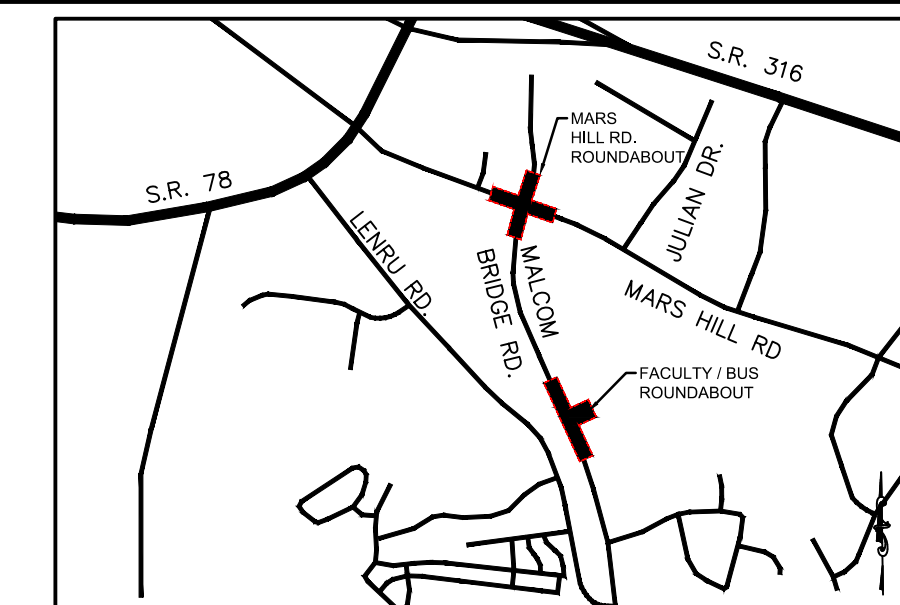
PROJECT NUMBER:
18001OCG

DATE:
04/01/19

811 Know what's below
Call before you dig dial 811

20' 10' 0 20' 40' 60'

GRAPHIC SCALE
SCALE 1" = 20'



LOCATION MAP
SCALE: N.T.S.

PROJECT NOTES:

OWNER / DEVELOPER:
Oconee County Government
23 N. Main Street
Watkinsville, Ga. 30677
Contact: Jody Woodall, PE
Tel.: (706) 769-2939

ENGINEER:
Carter Engineering Consultants, Inc.
3651 Mars Hill Road, Suite 2000
Watkinsville, Georgia 30677
Contact: Mark Campbell, PE
Tel. (770) 725-1200
Mark@carterengineering.net

Project located at Staff And Bus Entrance And Malcom Bridge Rd.

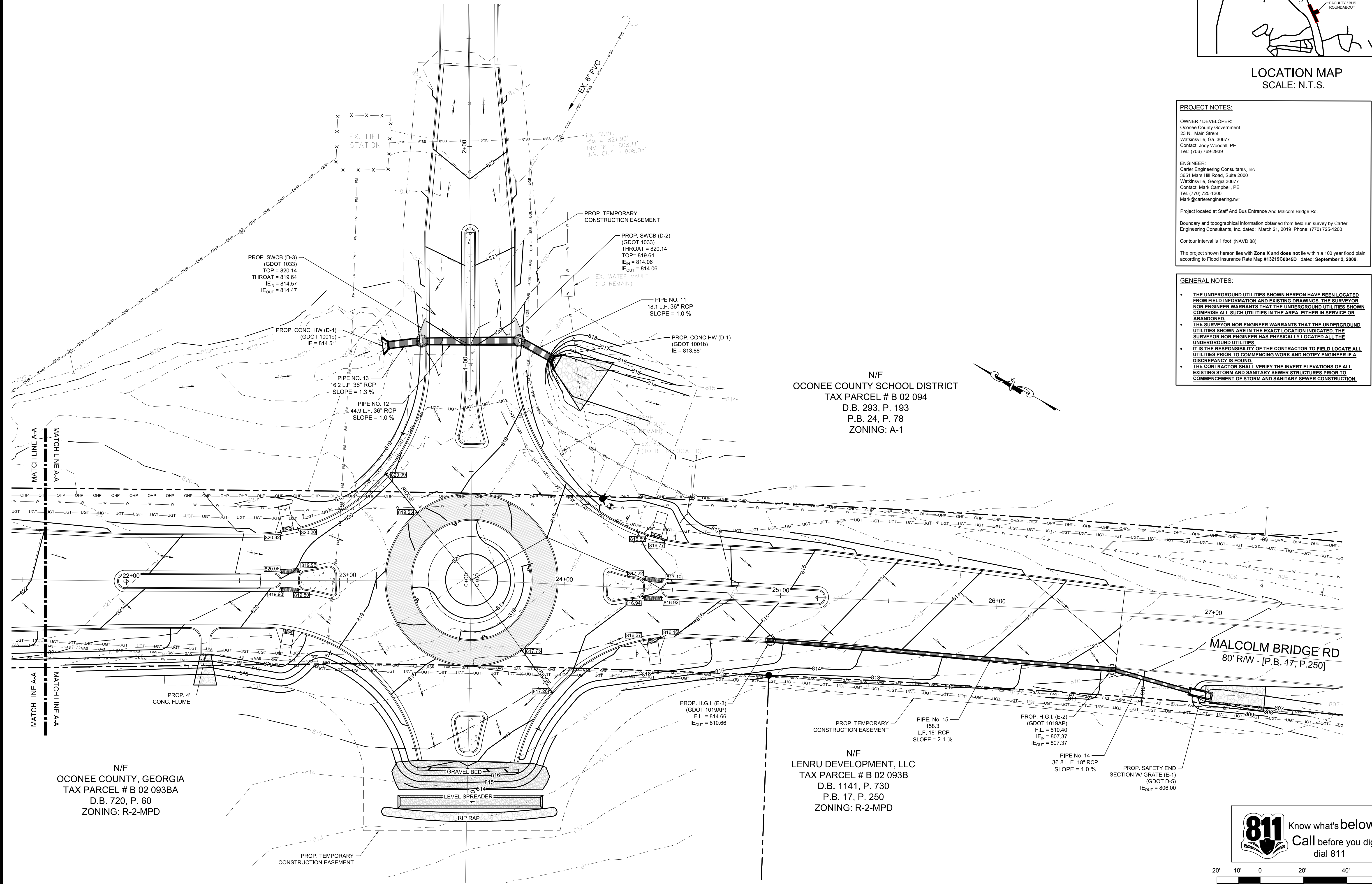
Boundary and topographical information obtained from field run survey by Carter Engineering Consultants, Inc. dated: March 21, 2019. Phone: (770) 725-1200

Contour interval is 1 foot (NAVD 88)

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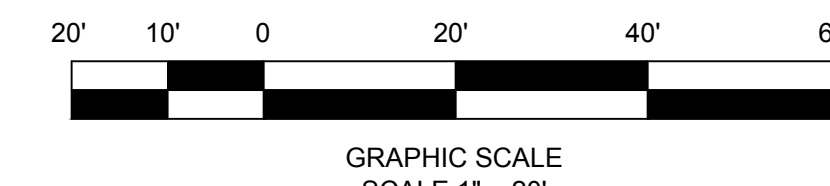
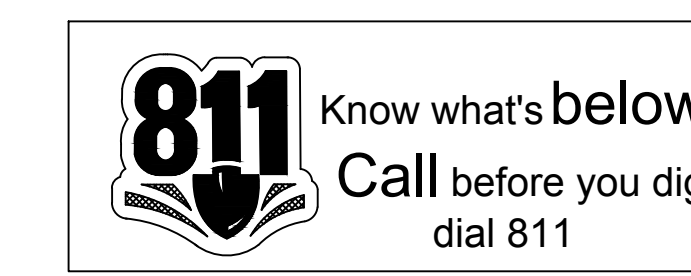


N/F
OCONEE COUNTY SCHOOL DISTRICT
TAX PARCEL # B 02 094
D.B. 293, P. 193
P.B. 24, P. 78
ZONING: A-1

N/F
OCONEE COUNTY, GEORGIA
TAX PARCEL # B 02 093BA
D.B. 720, P. 60
ZONING: R-2-MPD

N/F
LENRU DEVELOPMENT, LLC
TAX PARCEL # B 02 093B
D.B. 1141, P. 730
P.B. 17, P. 250
ZONING: R-2-MPD

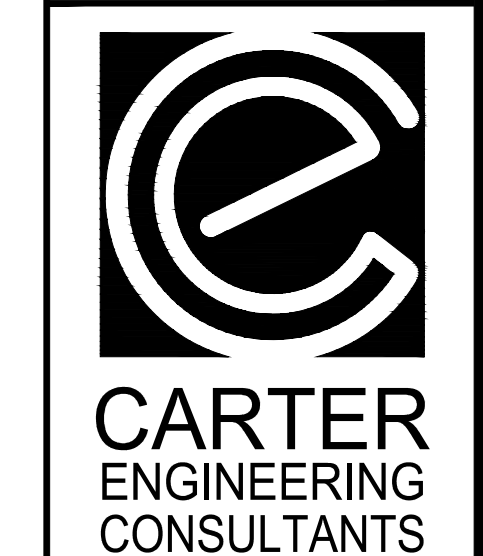
MALCOLM BRIDGE RD
80' R/W - [P.B. 17, P.250]



REVISION BLOCK:	REV. #	DATE	REVISION
	A	01/19/2019	INITIAL REVIEW
	B	03/19/2019	90% SUBMITTAL
	C	04/01/2019	ISSUE FOR REVIEW
	D	04/12/2019	CONTRACTOR BID



04/12/19



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3651 Mars Hill Road, Suite 2000
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P: 770.725.1200
F: 770.725.1204
www.carterengineering.net

ROUNDABOUT PLANS
for
OCONEE COUNTY GOVERNMENT
STAFF AND BUS ENTRANCE AND MALCOM BRIDGE RD.

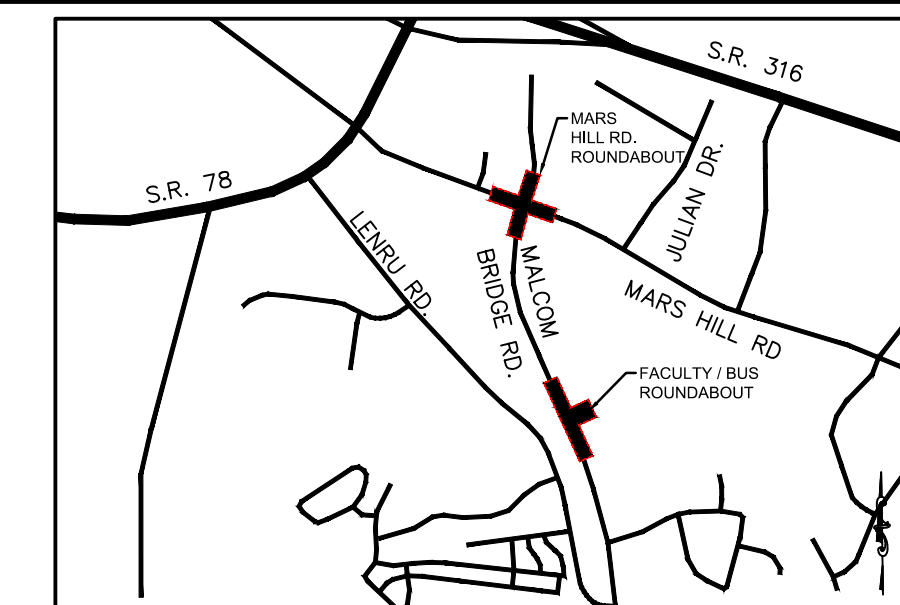
PROJECT NAME:
ROUNDABOUT PLANS

SHEET TITLE:
GRADING & DRAINAGE PLAN

SHEET NUMBER:
C-4.0

PROJECT NUMBER:
18001OCG

DATE:
04/01/19



LOCATION MAP
SCALE: N.T.S.

PROJECT NOTES:

OWNER / DEVELOPER:
Oconee County Government
23 N. Main Street
Watkinsville, Ga. 30677
Contact: Jody Woodall, PE
Tel.: (706) 769-2939

ENGINEER:
Carter Engineering Consultants, Inc.
3651 Mars Hill Road, Suite 2000
Watkinsville, Georgia 30677
Contact: Mark Campbell, PE
Tel. (770) 725-1200
Mark@carterengineering.net

Project located at Staff And Bus Entrance And Malcom Bridge Rd.

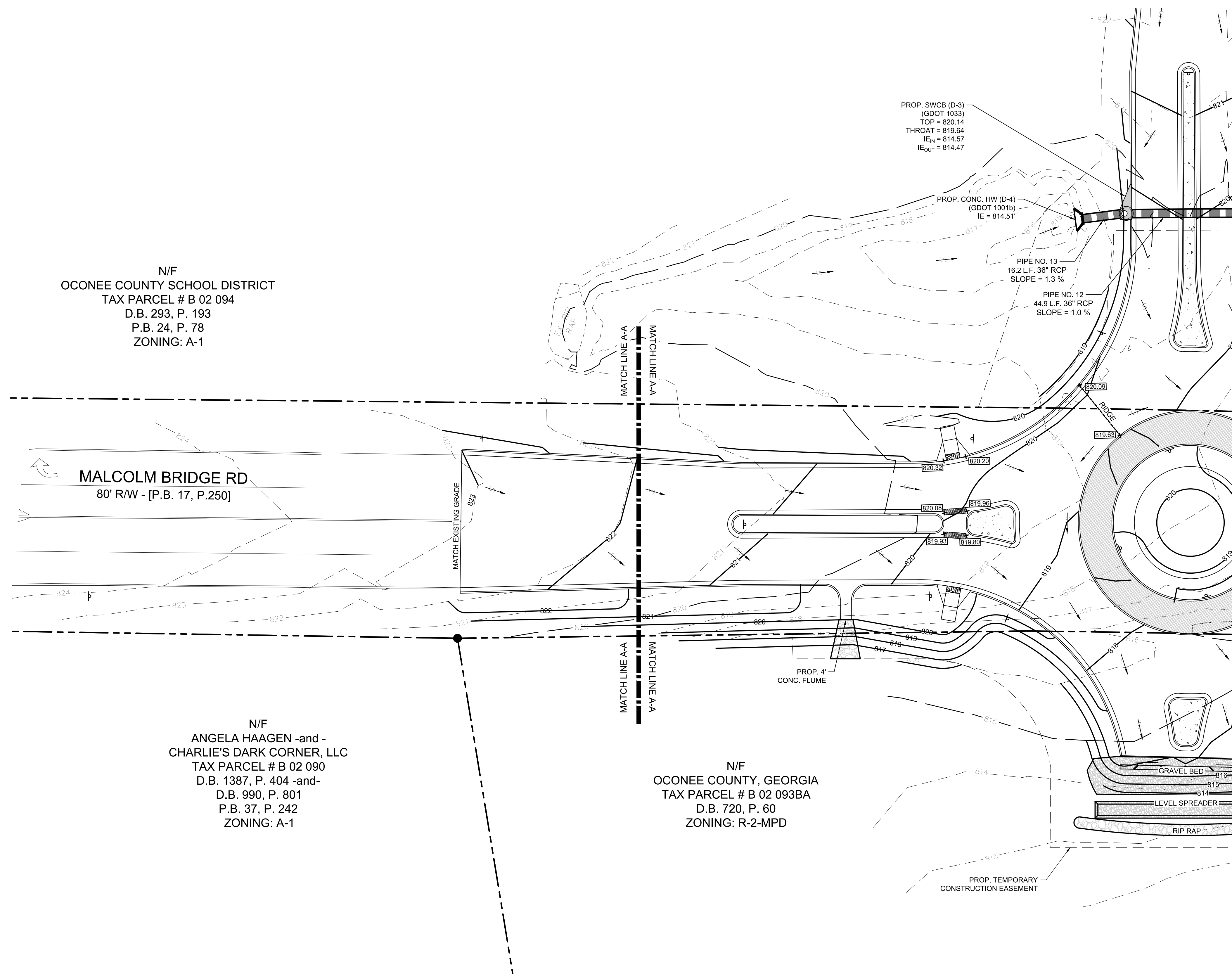
Boundary and topographical information obtained from field run survey by Carter Engineering Consultants, Inc. dated: March 21, 2019. Phone: (770) 725-1200

Contour interval is 1 foot (NAVD 88)

The project shown hereon lies with Zone X and does not lie within a 100 year flood plain according to Flood Insurance Rate Map #13219C0045D dated: September 2, 2009.

GENERAL NOTES:

- THE UNDERGROUND UTILITIES SHOWN HEREON HAVE BEEN LOCATED FROM FIELD INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR NOR ENGINEER WARRANTS THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED.
- THE SURVEYOR NOR ENGINEER WARRANTS THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. THE SURVEYOR NOR ENGINEER HAS PHYSICALLY LOCATED ALL THE UNDERGROUND UTILITIES.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD LOCATE ALL UTILITIES PRIOR TO COMMENCING WORK AND NOTIFY ENGINEER IF A DISCREPANCY IS FOUND.
- THE CONTRACTOR SHALL VERIFY THE INVERT ELEVATIONS OF ALL EXISTING STORM AND SANITARY SEWER STRUCTURES PRIOR TO COMMENCEMENT OF STORM AND SANITARY SEWER CONSTRUCTION.

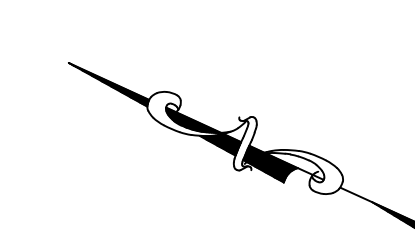


N/F
OCONEE COUNTY SCHOOL DISTRICT
TAX PARCEL # B 02 094
D.B. 293, P. 193
P.B. 24, P. 78
ZONING: A-1

MALCOLM BRIDGE RD
80' R/W - [P.B. 17, P.250]

N/F
ANGELA HAAGEN -and -
CHARLIE'S DARK CORNER, LLC
TAX PARCEL # B 02 090
D.B. 1387, P. 404 -and-
D.B. 990, P. 801
P.B. 37, P. 242
ZONING: A-1

N/F
OCONEE COUNTY, GEORGIA
TAX PARCEL # B 02 093BA
D.B. 720, P. 60
ZONING: R-2-MPD



811 Know what's below
Call before you dig
dial 811

GRAPHIC SCALE
SCALE 1" = 20'

REVISION BLOCK:	REV. #	DATE	REVISION
	A	01/19/2019	INITIAL REVIEW
	B	03/19/2019	90% SUBMITTAL
	C	04/01/2019	ISSUE FOR REVIEW
	D	04/12/2019	CONTRACTOR BID

04/12/19

**CARTER
ENGINEERING
CONSULTANTS**

Carter Engineering Consultants, Inc.
3651 Mars Hill Road, Suite 2000
Watkinsville, GA 30677
P: 770.725.1200
F: 770.725.1204
www.carterengineering.net

ROUNDABOUT PLANS
for
OCONEE COUNTY GOVERNMENT
STAFF AND BUS ENTRANCE AND MALCOLM BRIDGE RD.

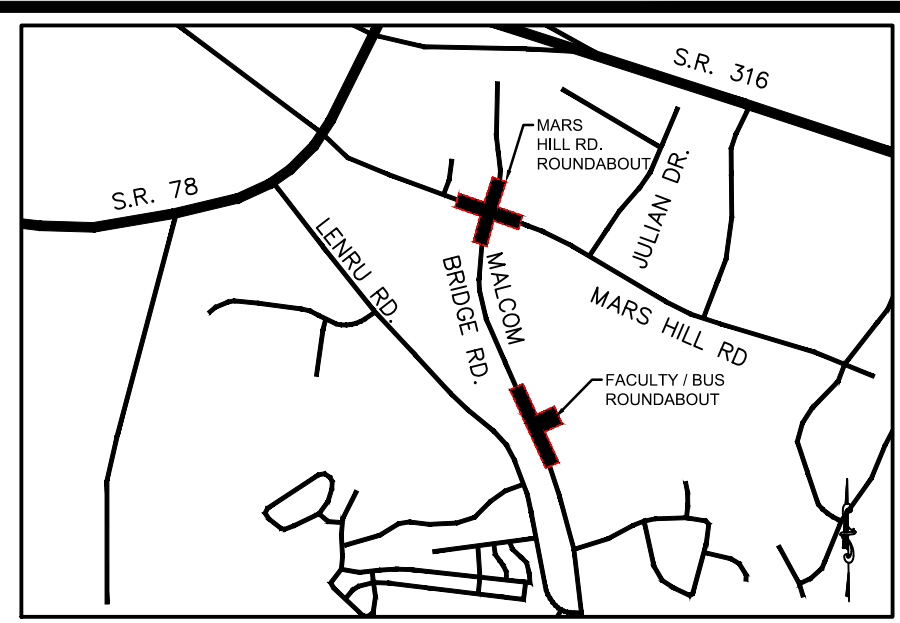
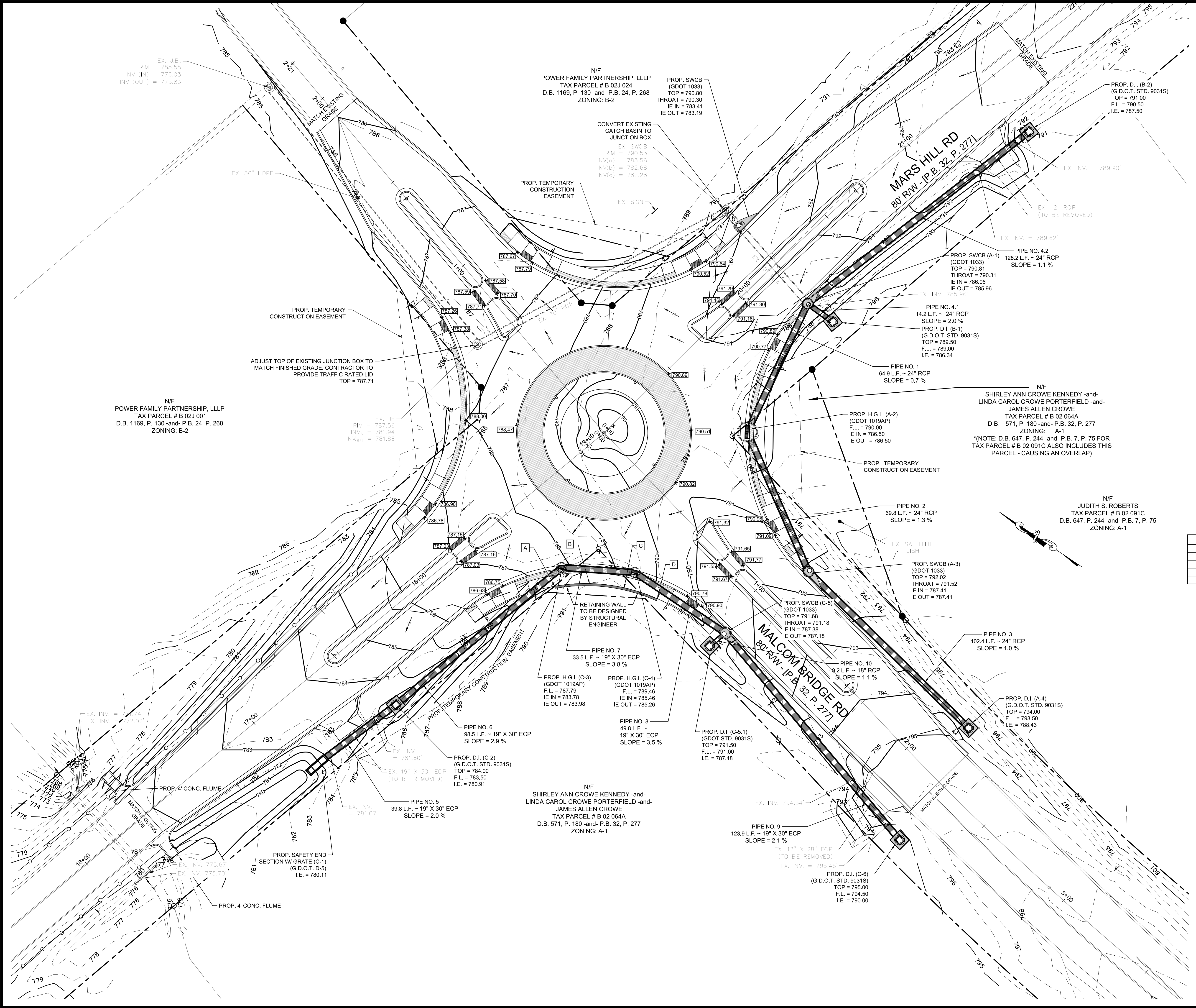
PROJECT NAME:
**ROUNDABOUT
PLANS**

SHEET TITLE:
**GRADING &
DRAINAGE PLAN**

SHEET NUMBER:
C-4.1

PROJECT NUMBER:
180010CG

DATE:
04/01/19



LOCATION MAP
SCALE: N.T.S.

PROJECT NOTES:

OWNER / DEVELOPER:
Oconee County Government
23 N. Main Street
Watkinsville, Ga. 30677
Contact: Jody Woodall, PE
Tel.: (706) 769-2939

ENGINEER:
Carter Engineering Consultants, Inc.
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Contact: Mark Campbell, PE
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Mark@carterengineering.net

Project located at Staff And Bus Entrance And Malcom Bridge Rd.

Boundary and topographical information obtained from field run survey by Carter Engineering Consultants, Inc. dated: March 21, 2019. Phone: (770) 725-1200

Contour interval is 1 foot (NAVD 88)

The project shown hereon lies with Zone X and does not lie within a 100 year flood plain according to Flood Insurance Rate Map #13219C0045D dated: September 2, 2009.

GENERAL NOTES:

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NOTE:

- RETAINING WALL TO BE DESIGNED BY A LICENSED STRUCTURAL ENGINEER AND REVIEWED BY THE GEOTECHNICAL ENGINEER.

RETAINING WALL

STATION	TW	BW	
A	00+00.00	789.0	788.4
B	00+16.00	791.0	789.2
C	00+32.00	791.0	790.0
D	00+48.00	791.0	790.8

REVISION BLOCK:

REV. #	DATE	REVISION
A	01/19/2019	INITIAL REVIEW
B	03/19/2019	90% SUBMITTAL
C	04/01/2019	ISSUE FOR REVIEW
D	04/12/2019	CONTRACTOR BID



04/12/19

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F: 770.725.1204
www.carterengineering.net

ROUNDABOUT PLANS
for
OCONEE COUNTY GOVERNMENT
MARS HILL ROAD INTERSECTION AND MALCOM BRIDGE RD.

PROJECT NAME:
ROUNDABOUT PLANS

SHEET TITLE:
GRADING & DRAINAGE PLAN

SHEET NUMBER:
C-4.2

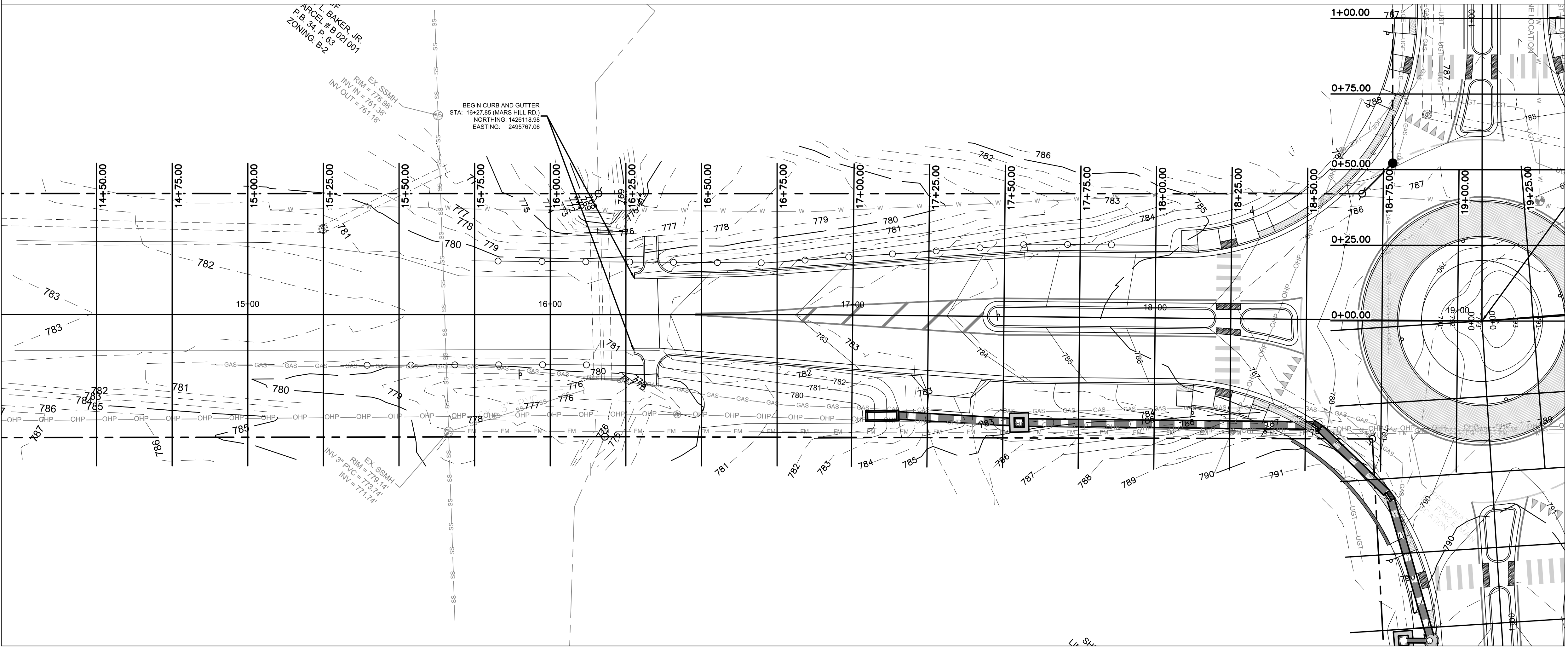
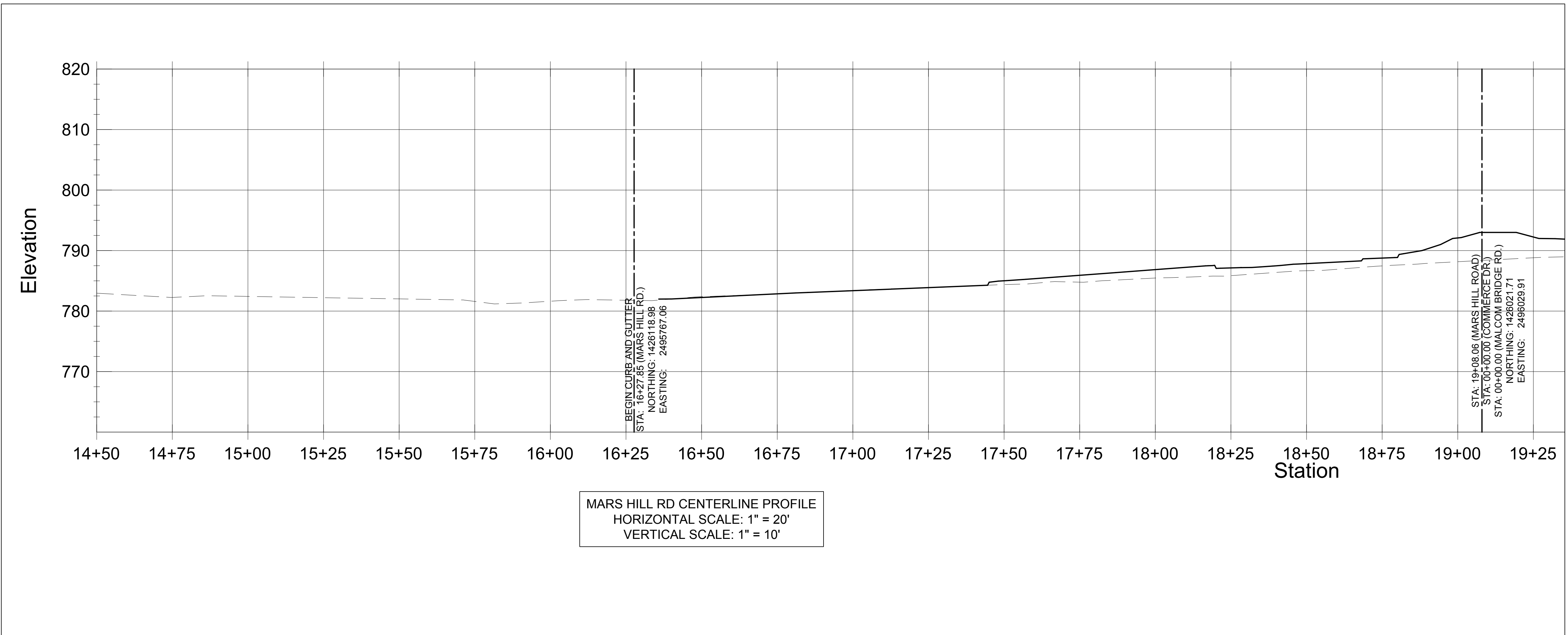
PROJECT NUMBER:
18001OCG

DATE:
04/01/19

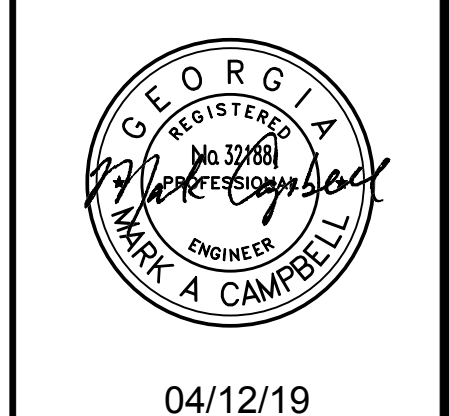
811 Know what's below
Call before you dig dial 811

20' 10' 0 20' 40' 60'

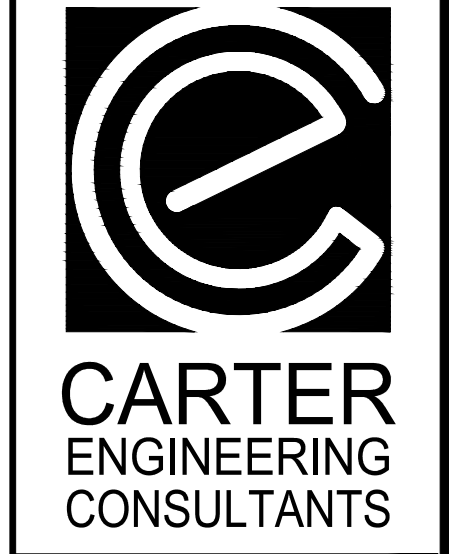
GRAPHIC SCALE
SCALE 1" = 20'



REVISION/BLOCK	REV. #	DATE	REVISION
	A	07/19/2019	INITIAL REVIEW



04/12/19



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ROUNDABOUT PLANS
 for
OCONEE COUNTY GOVERNMENT
 STAFF AND BUS ENTRANCE AND MALCOM BRIDGE RD.

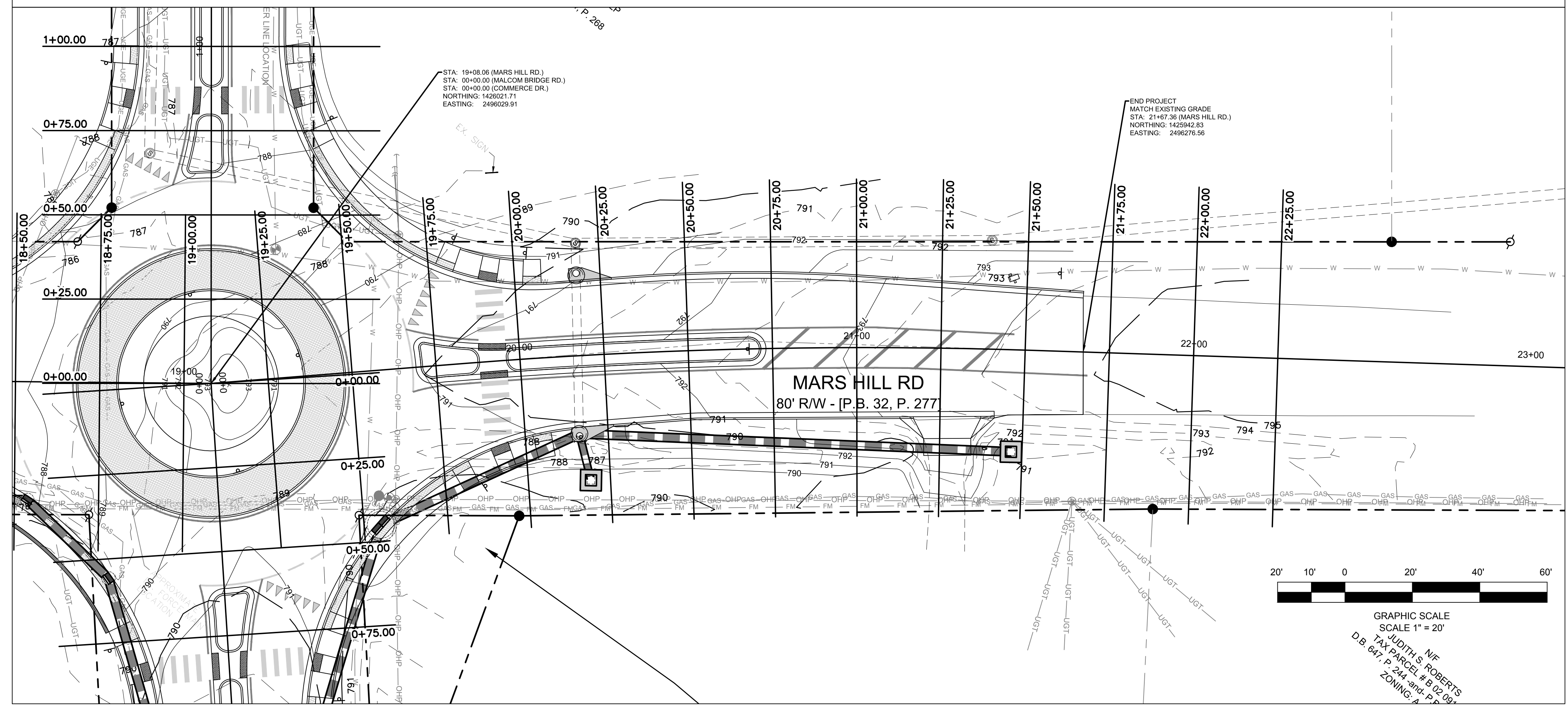
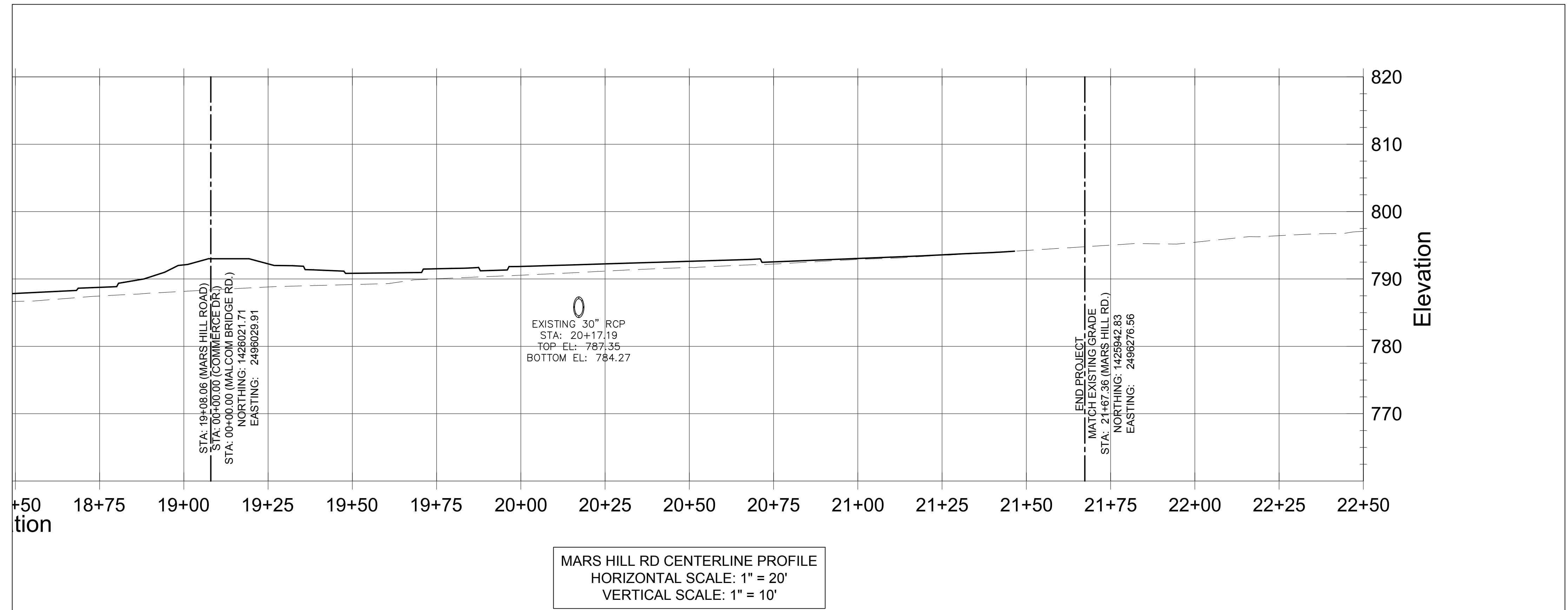
PROJECT NAME:
ROUNDABOUT PLANS

SHEET TITLE:
ROADWAY PROFILE I

SHEET NUMBER:
C-5.1

PROJECT NUMBER:
18001OCG

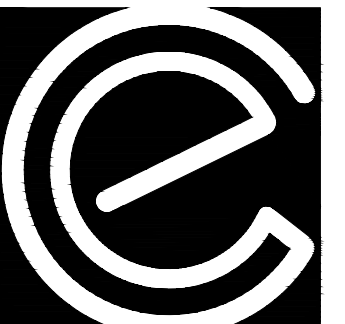
DATE:
04/01/19



REVISION/BLOCK	REV. #	DATE	REVISION
	A	01/19/2019	INITIAL REVIEW



04/12/19



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ROUNDABOUT PLANS
for
OCONEE COUNTY GOVERNMENT
STAFF AND BUS ENTRANCE AND MALCOM BRIDGE RD.

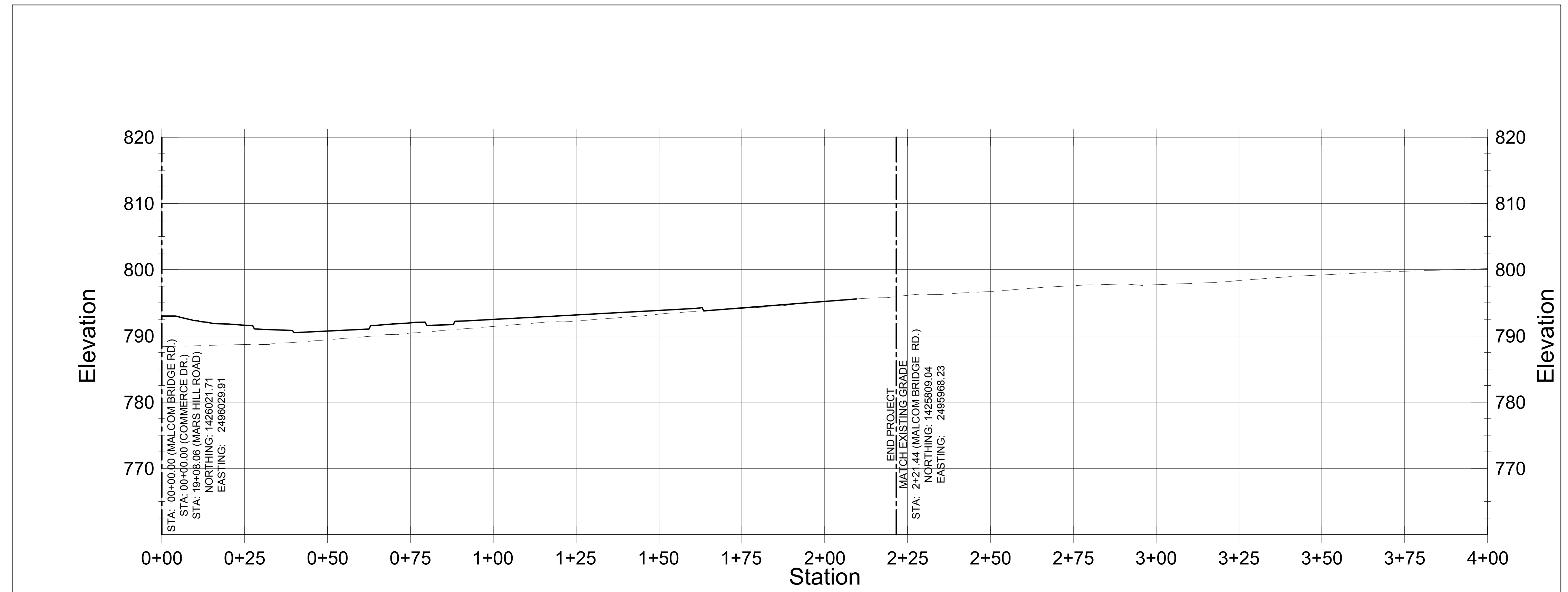
PROJECT NAME:
ROUNDABOUT PLANS

SHEET TITLE:
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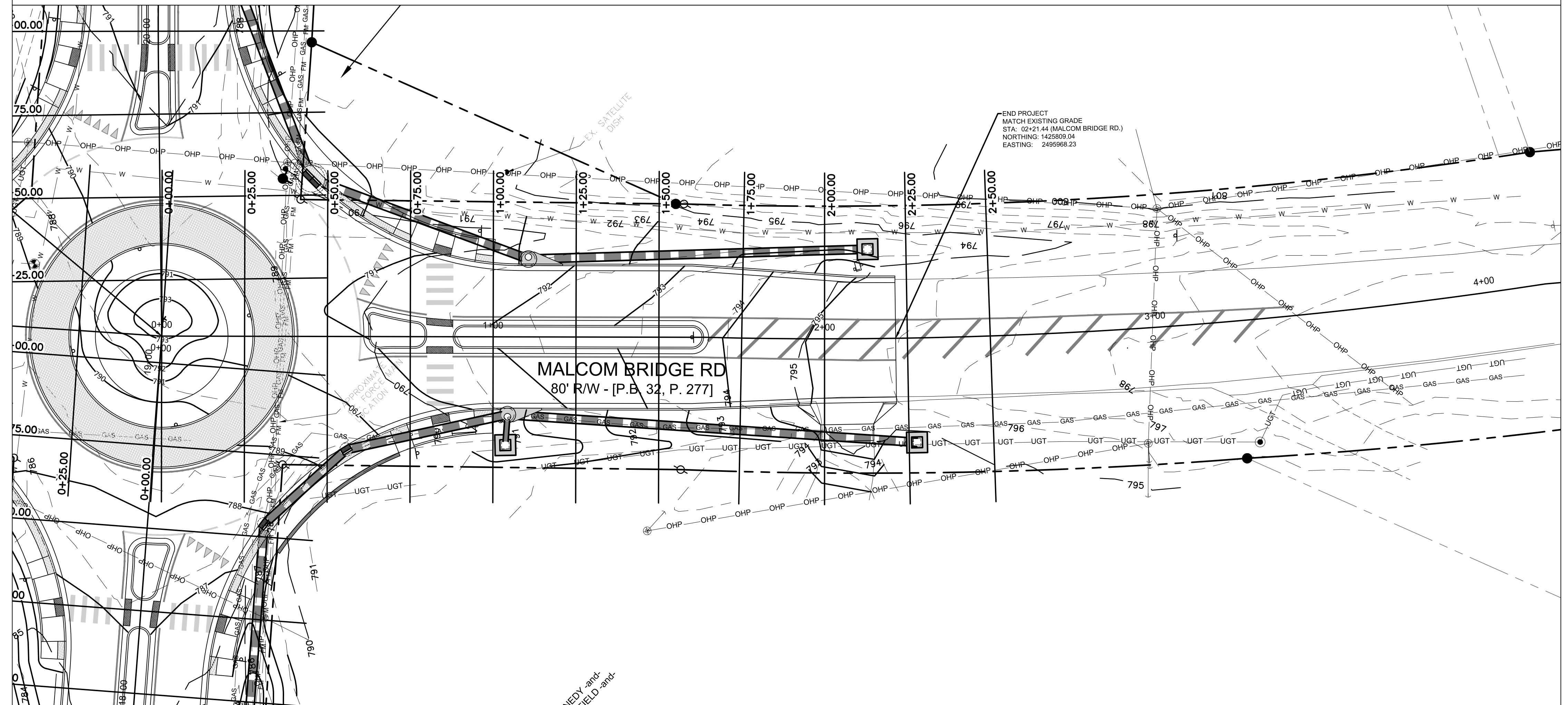
SHEET NUMBER:
C-5.2

PROJECT NUMBER:
18001OCG

DATE:
04/01/19



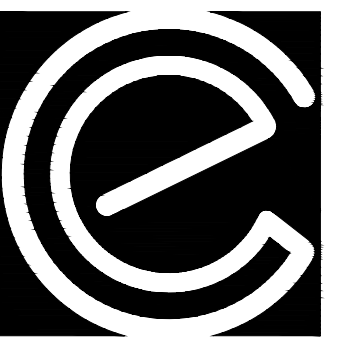
MALCOM BRIDGE RD CENTERLINE PROFILE
 HORIZONTAL SCALE: 1" = 20'
 VERTICAL SCALE: 1" = 10'



REVISION/BLOCK	REV. #	DATE	REVISION
	A	07/19/2019	INITIAL REVIEW



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ROUNDABOUT PLANS
 for
OCONEE COUNTY GOVERNMENT
 STAFF AND BUS ENTRANCE AND MALCOM BRIDGE RD.

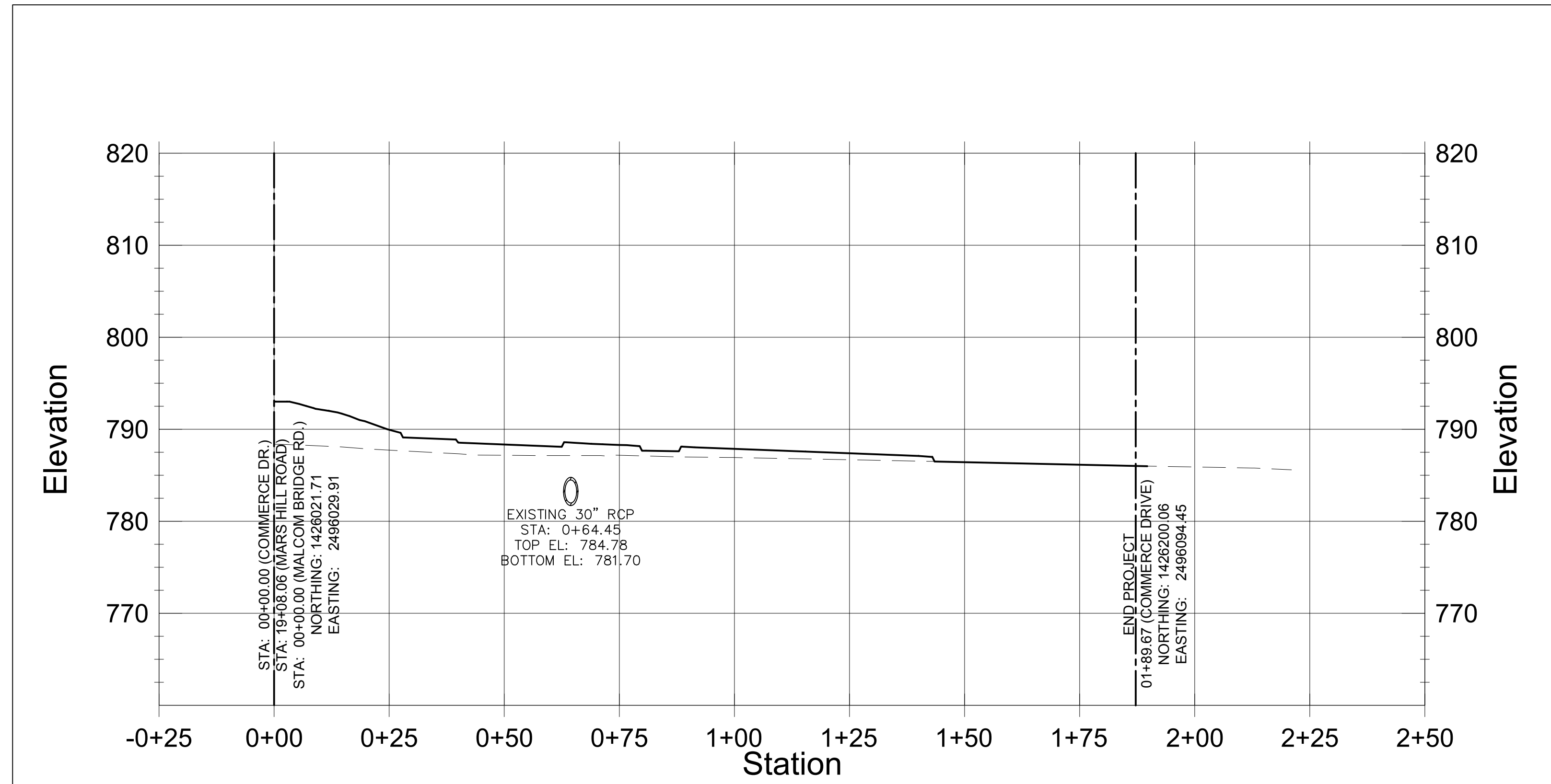
PROJECT NAME:
ROUNDABOUT PLANS

SHEET TITLE:
ROADWAY PROFILE III

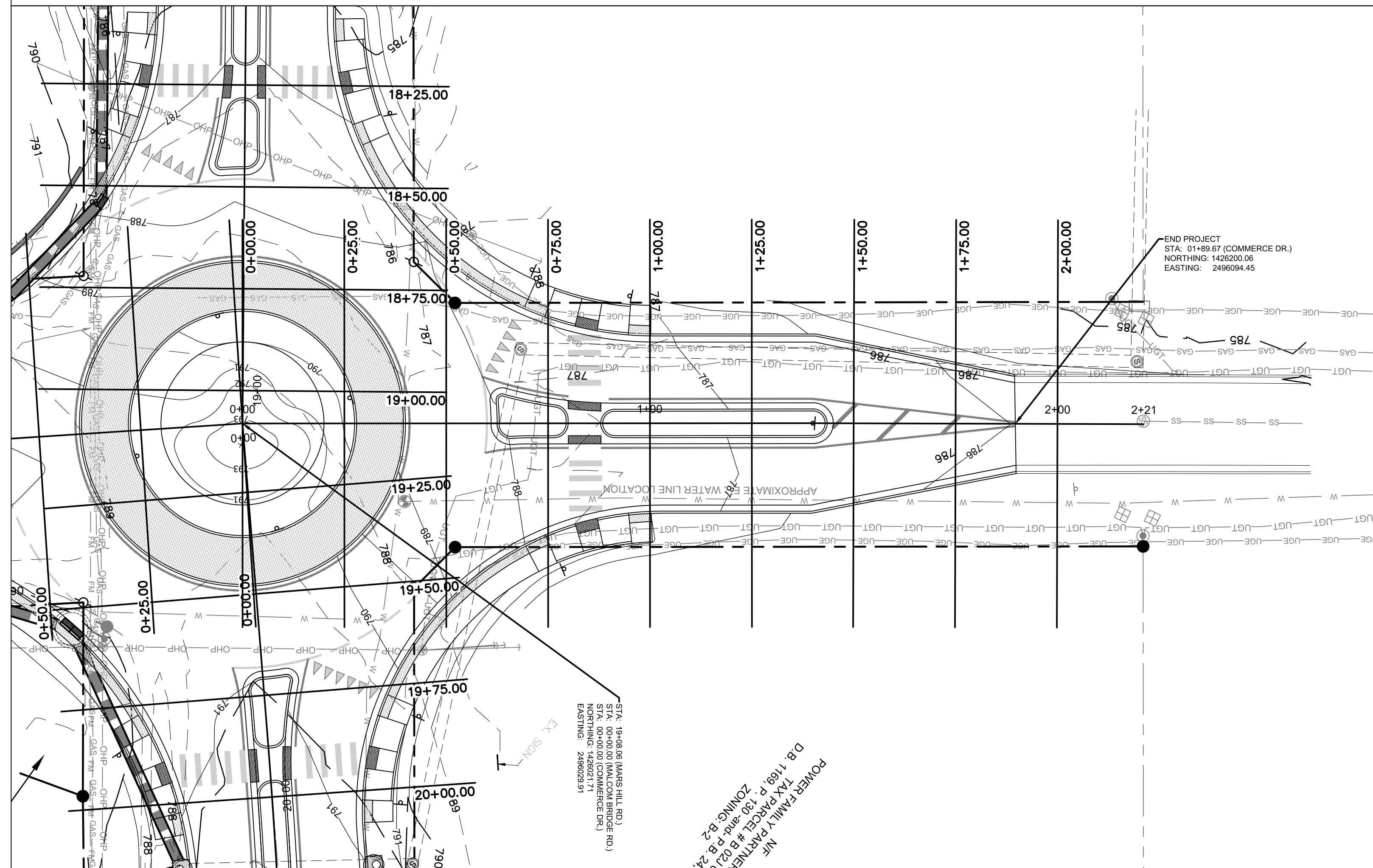
SHEET NUMBER:
C-5.3

PROJECT NUMBER:
18001OCG

DATE:
04/01/19



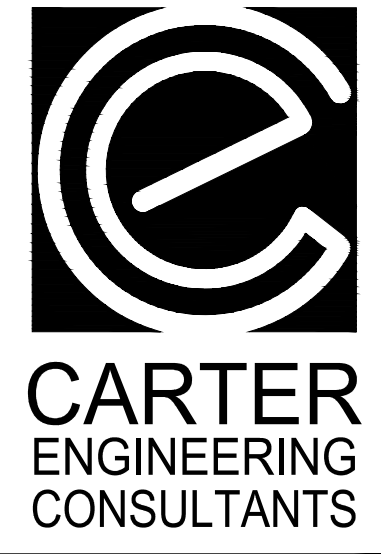
COMMERCE DRIVE CENTERLINE PROFILE
 HORIZONTAL SCALE: 1" = 20'
 VERTICAL SCALE: 1" = 10'



REV. #	DATE	REVISION
A	07/19/2019	INITIAL REVIEW



04/12/19



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ROUNDABOUT PLANS
 for
OCONEE COUNTY GOVERNMENT
 STAFF AND BUS ENTRANCE AND MALCOM BRIDGE RD.

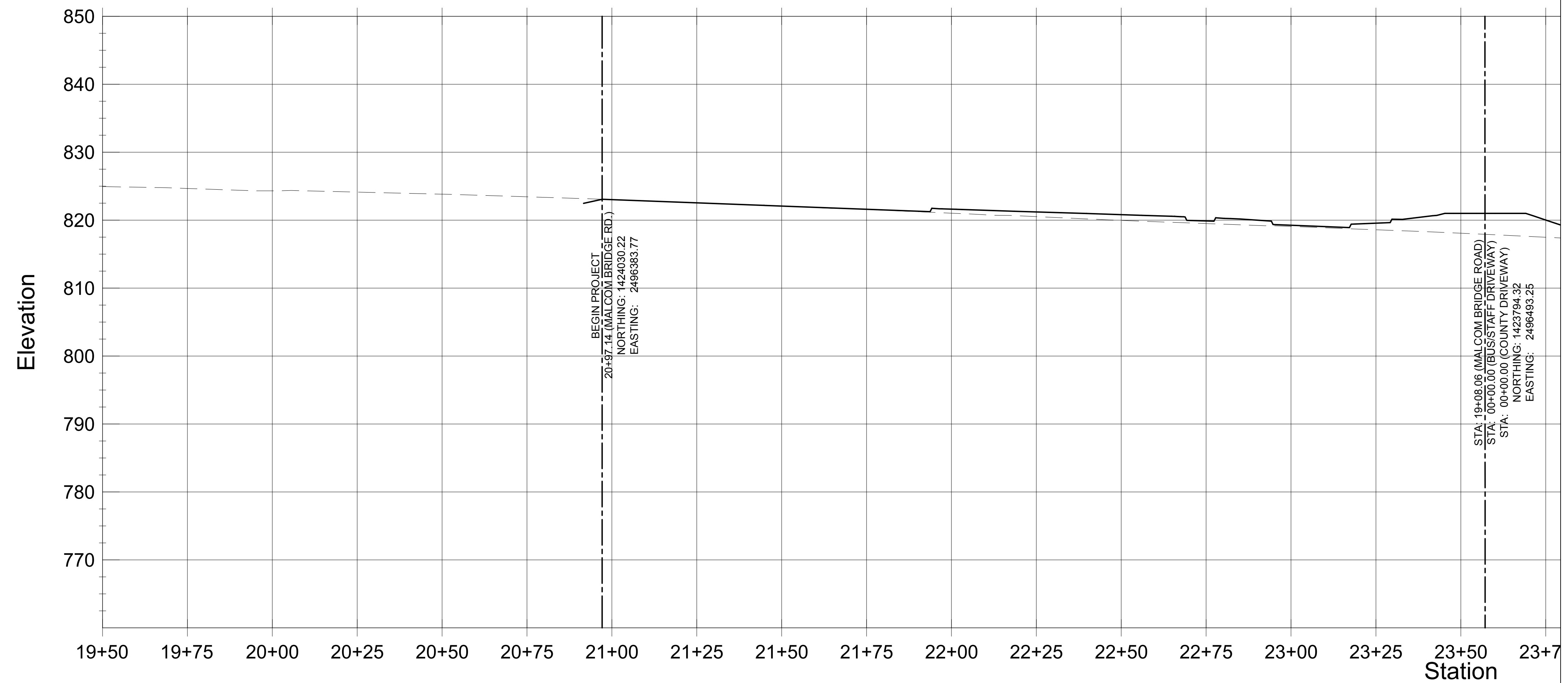
PROJECT NAME:
ROUNDABOUT PLANS

SHEET TITLE:
ROADWAY PROFILE IV

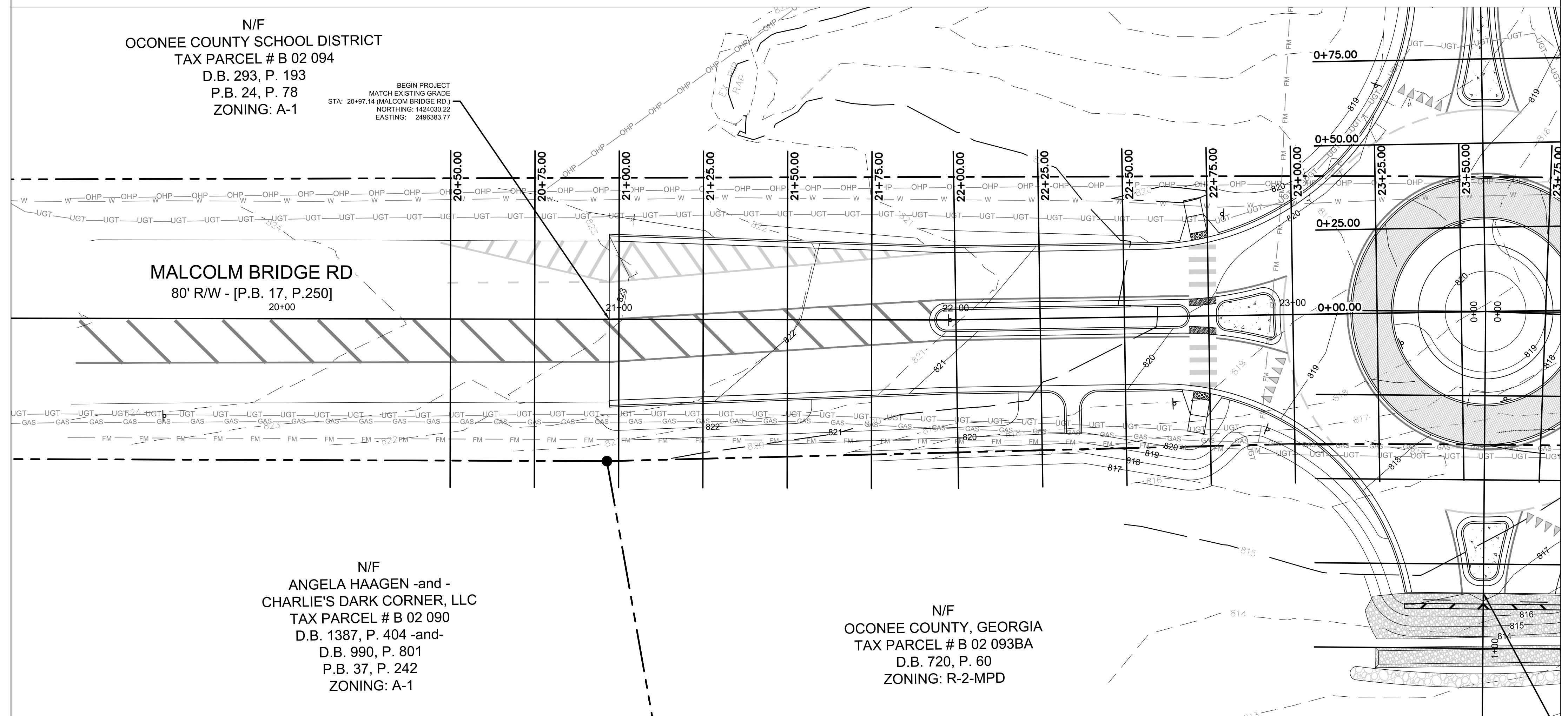
SHEET NUMBER:
C-5.4

PROJECT NUMBER:
18001OCG

DATE:
04/01/19



MALCOLM BRIDGE RD CENTERLINE PROFILE
 HORIZONTAL SCALE: 1" = 20'
 VERTICAL SCALE: 1" = 10'

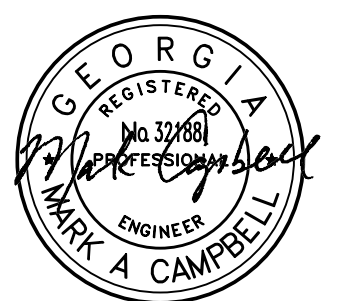


N/F
 OCONEE COUNTY SCHOOL DISTRICT
 TAX PARCEL # B 02 094
 D.B. 293, P. 193
 P.B. 24, P. 78
 ZONING: A-1

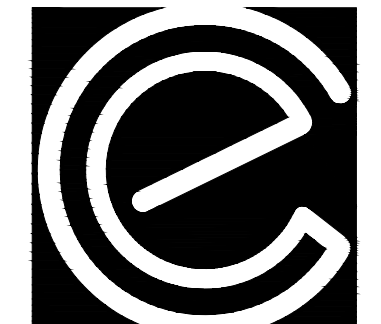
N/F
 ANGELA HAAGEN -and -
 CHARLIE'S DARK CORNER, LLC
 TAX PARCEL # B 02 090
 D.B. 1387, P. 404 -and -
 D.B. 990, P. 801
 P.B. 37, P. 242
 ZONING: A-1

N/F
 OCONEE COUNTY, GEORGIA
 TAX PARCEL # B 02 093BA
 D.B. 720, P. 60
 ZONING: R-2-MPD

REV. #	DATE	REVISION
A	07/19/2019	INITIAL REVIEW



04/12/19



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ROUNDABOUT PLANS
 for
OCONEE COUNTY GOVERNMENT
 STAFF AND BUS ENTRANCE AND MALCOLM BRIDGE RD.

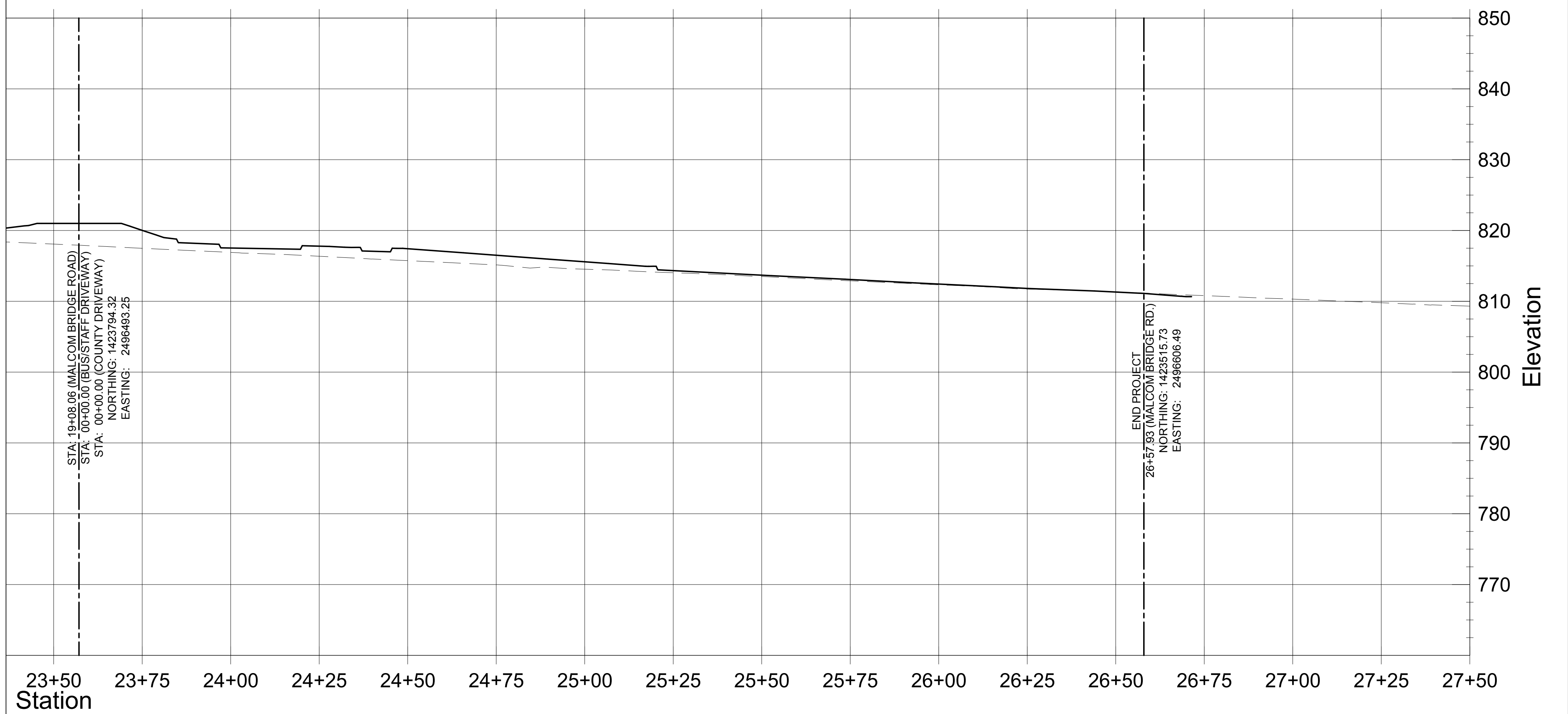
PROJECT NAME:
ROUNDABOUT PLANS

SHEET TITLE:
ROADWAY PROFILE V

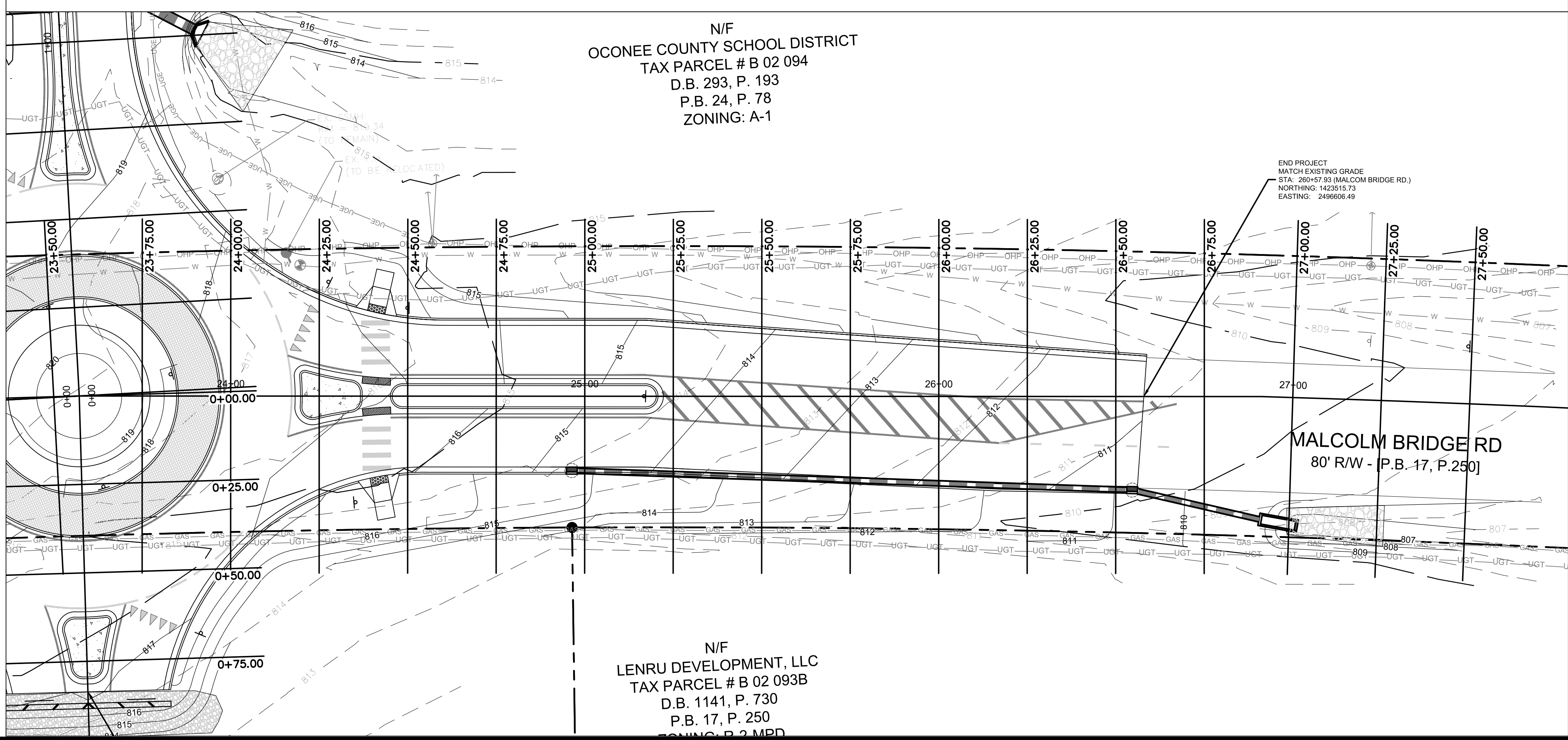
SHEET NUMBER:
C-5.5

PROJECT NUMBER:
18001OCG

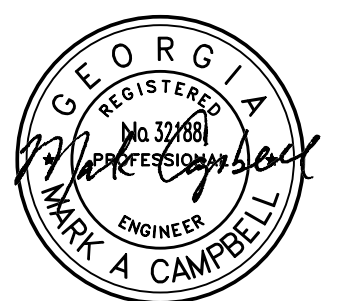
DATE:
04/01/19



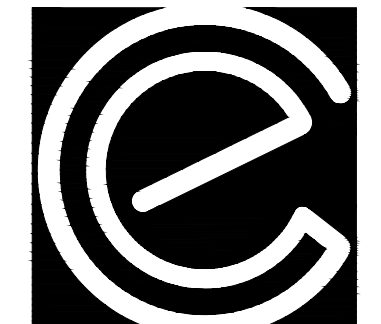
MALCOLM BRIDGE RD CENTERLINE PROFILE
 HORIZONTAL SCALE: 1" = 20'
 VERTICAL SCALE: 1" = 10'



REVISION/BLOCK	REV. #	DATE	REVISION
	A	07/19/2019	INITIAL REVIEW



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ROUNDABOUT PLANS
 for
OCONEE COUNTY GOVERNMENT
 STAFF AND BUS ENTRANCE AND MALCOLM BRIDGE RD.

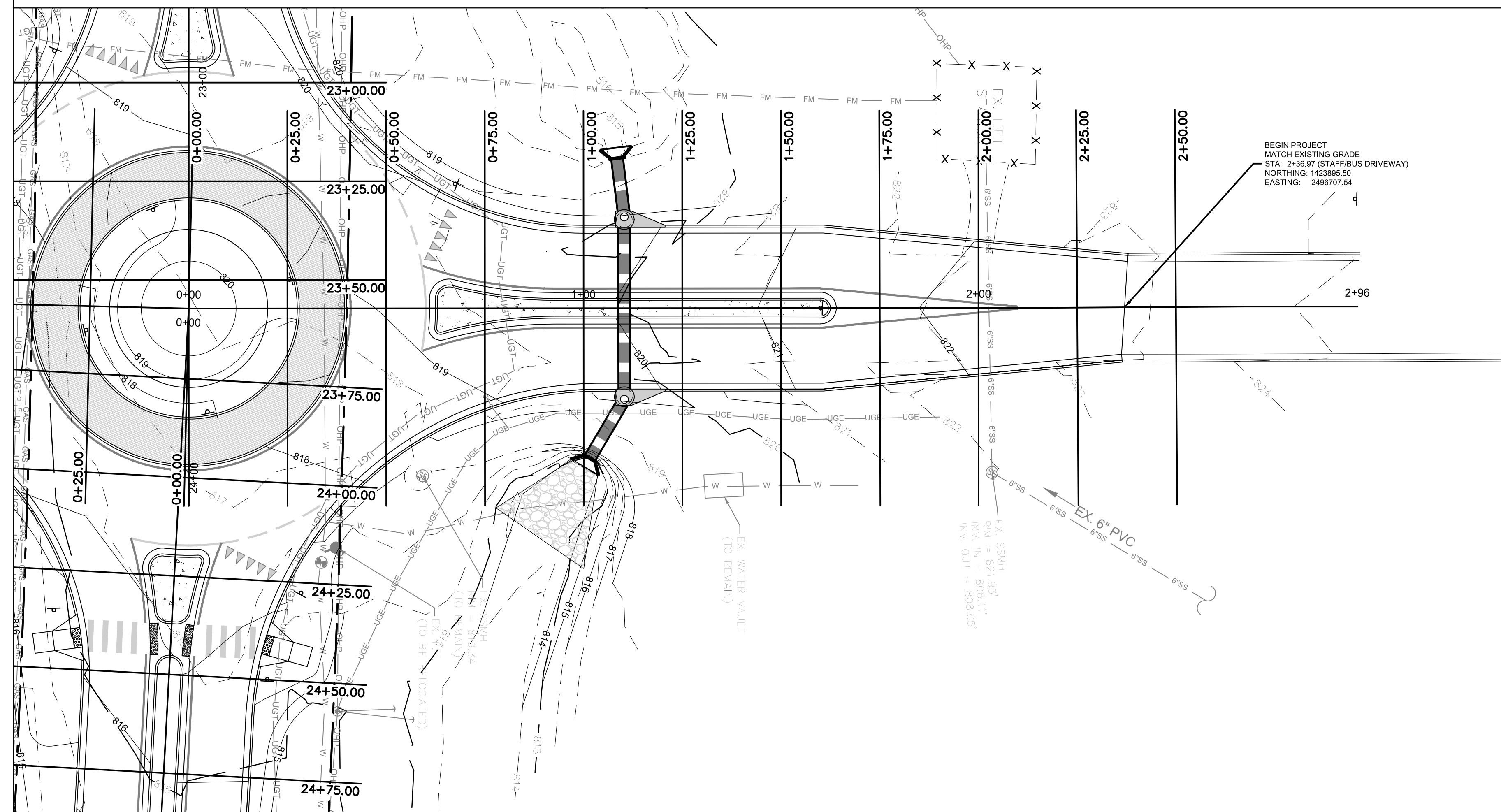
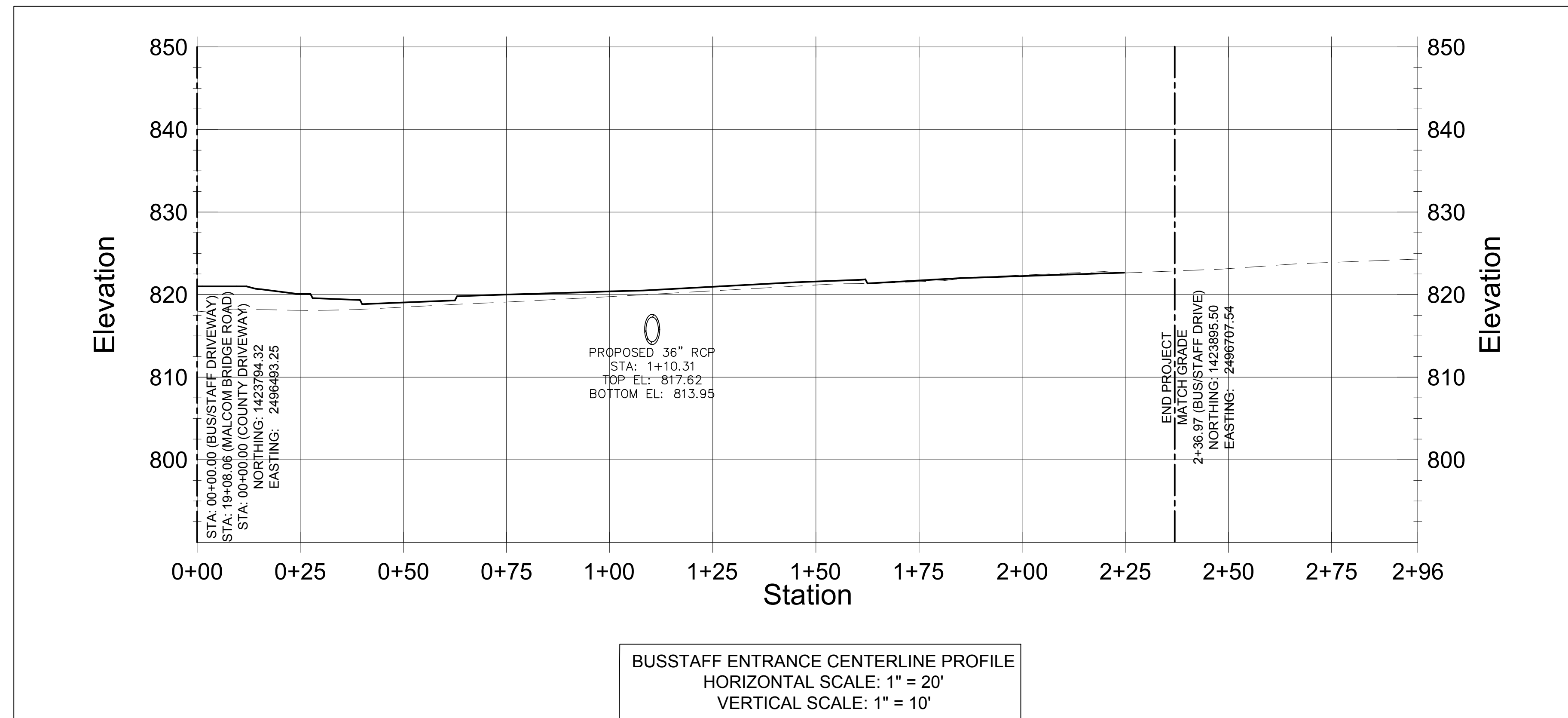
PROJECT NAME:
ROUNDABOUT PLANS

SHEET TITLE:
ROADWAY PROFILE VI

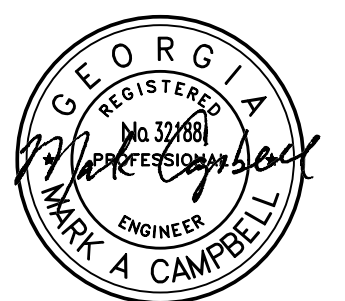
SHEET NUMBER:
C-5.6

PROJECT NUMBER:
18001OCG

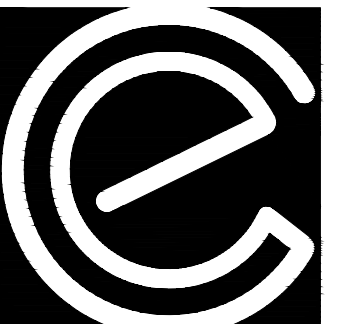
DATE:
04/01/19



REVISION/BLOCK	REV. #	DATE	REVISION
	A	07/19/2019	INITIAL REVIEW



04/12/19



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ROUNDABOUT PLANS
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OCONEE COUNTY GOVERNMENT
 STAFF AND BUS ENTRANCE AND MALCOM BRIDGE RD.

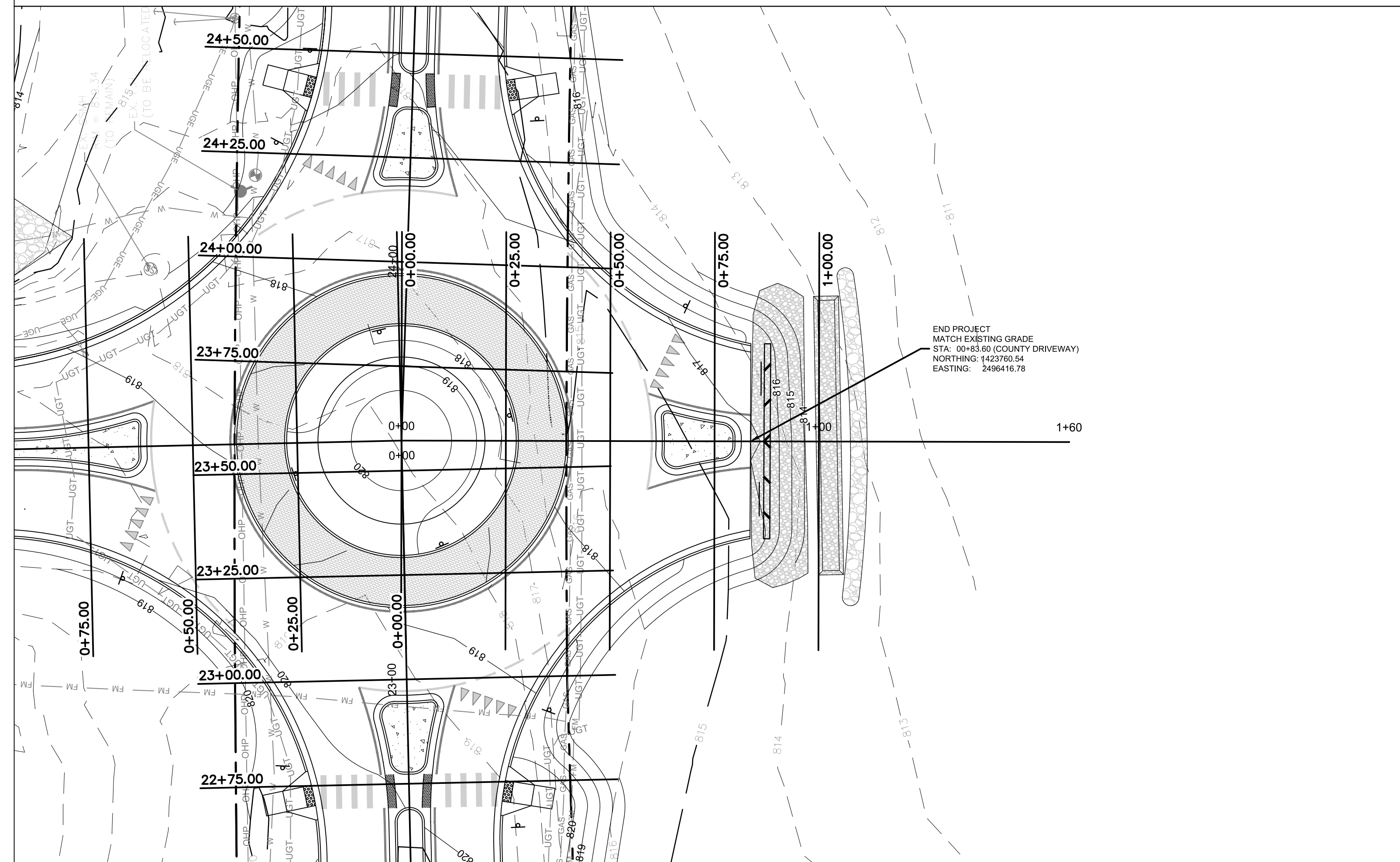
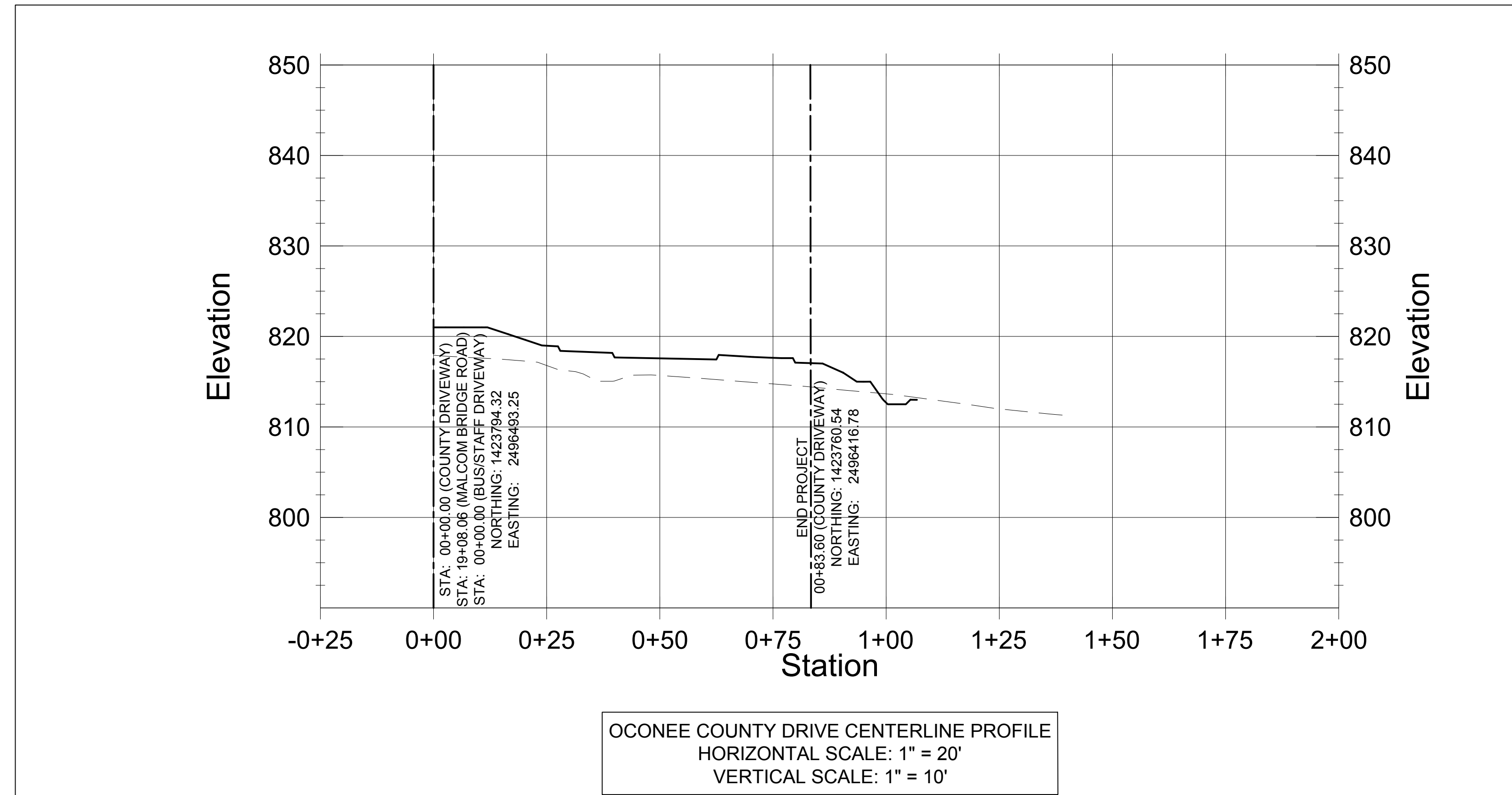
PROJECT NAME:
ROUNDABOUT PLANS

SHEET TITLE:
ROADWAY PROFILE VII

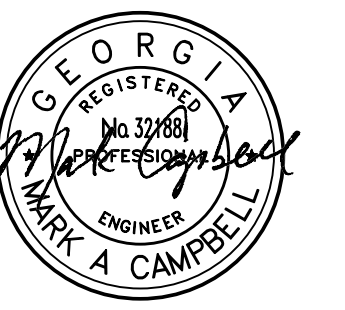
SHEET NUMBER:
C-5.7

PROJECT NUMBER:
18001OCG

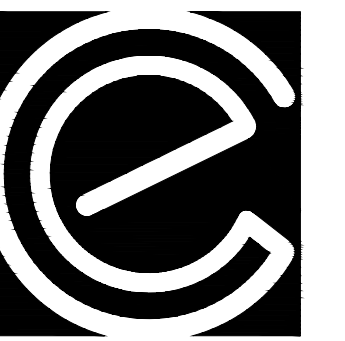
DATE:
04/01/19



REV. #	DATE	REVISION
A	01/19/2019	INITIAL REVIEW
B	03/19/2019	90% SUBMITTAL
C	04/01/2019	ISSUE FOR REVIEW
D	04/12/2019	CONTRACTOR BID



04/12/19



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ROUNDABOUT PLANS
 for
OCONEE COUNTY GOVERNMENT
 STAFF AND BUS ENTRANCE AND MALCOM BRIDGE RD.

PROJECT NAME:
ROUNDABOUT PLANS

SHEET TITLE:
ROADWAY PROFILE VIII

SHEET NUMBER:
C-5.8

PROJECT NUMBER:
18001OCG

DATE:
04/01/19

REVISION BLOCK:	REV #	DATE	REVISION
	A	01/19/2019	INITIAL REVIEW
	B	03/19/2019	90% SUBMITTAL
	C	04/01/2019	ISSUE FOR REVIEW
	D	04/12/2019	CONTRACTOR BID



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ROUNDABOUT PLANS
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OCONEE COUNTY GOVERNMENT
 STAFF AND BUS ENTRANCE AND MALCOM BRIDGE RD.

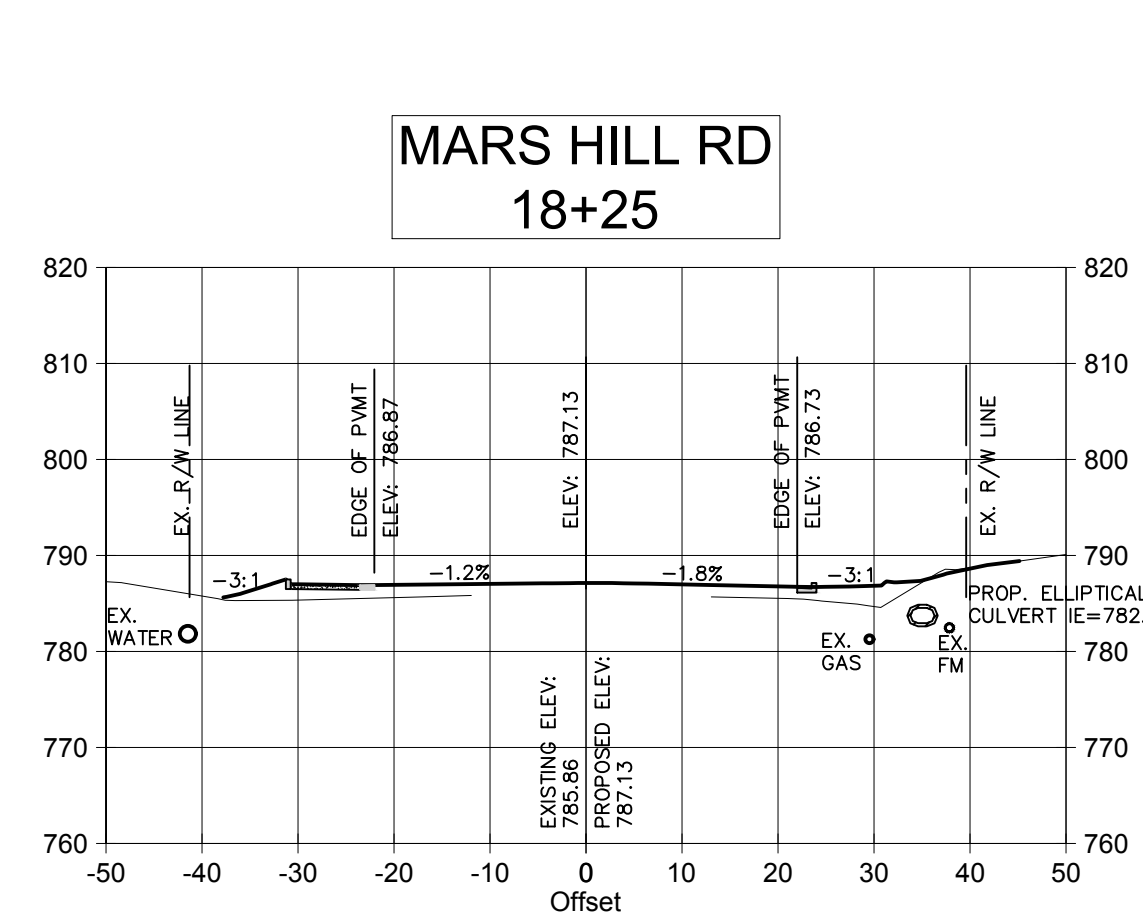
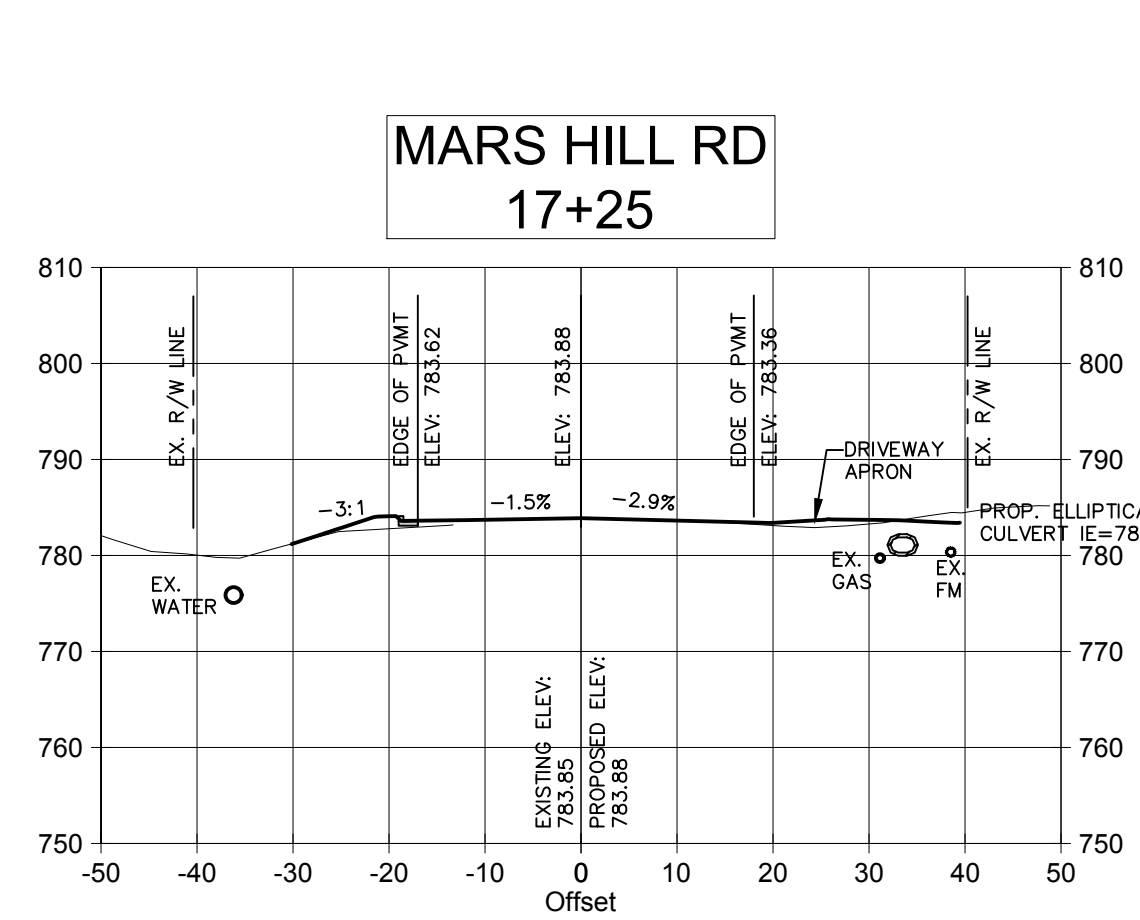
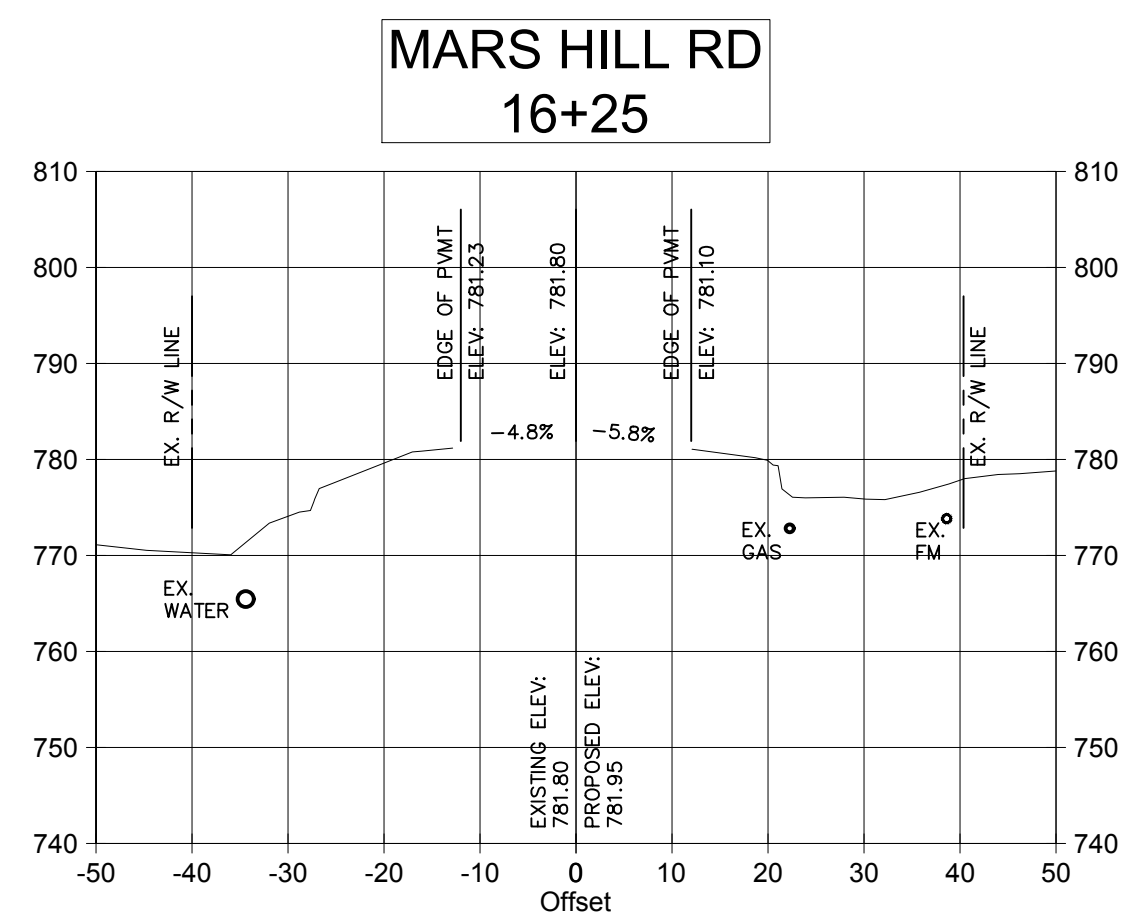
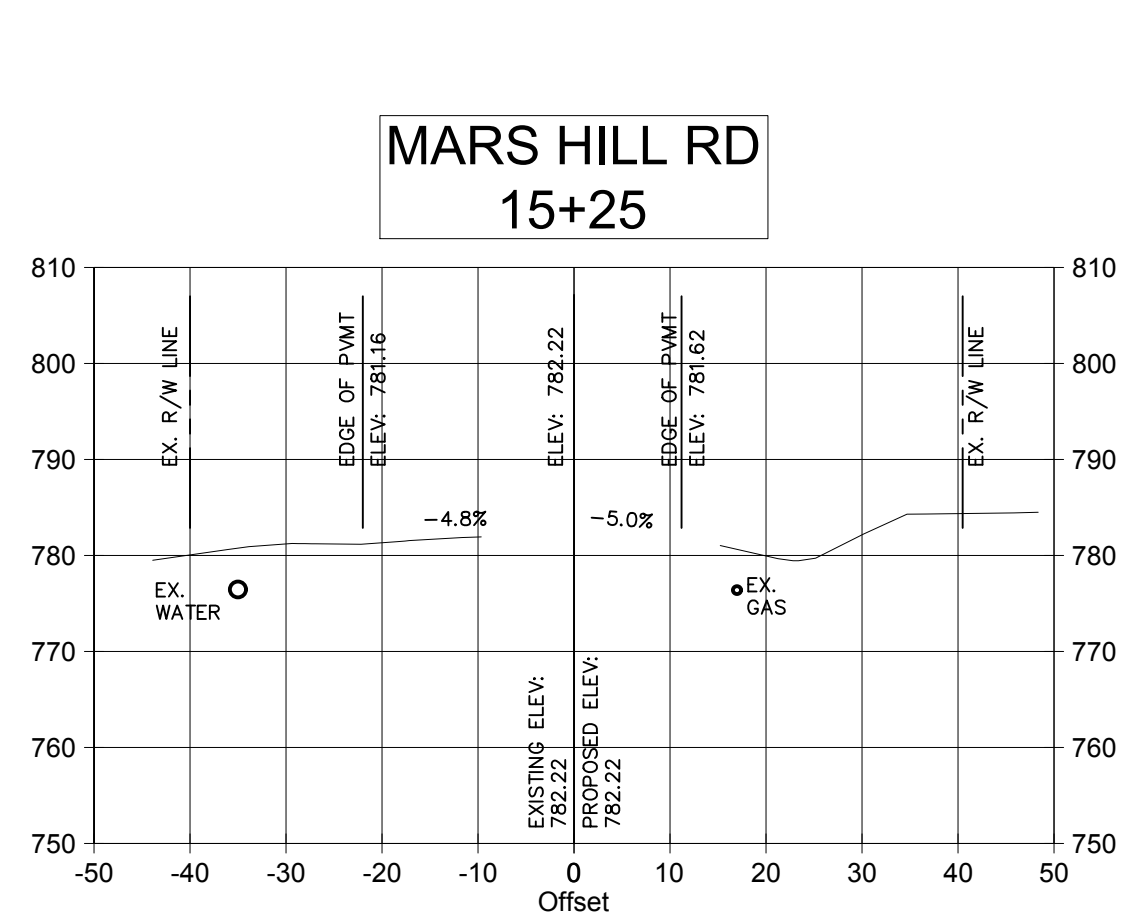
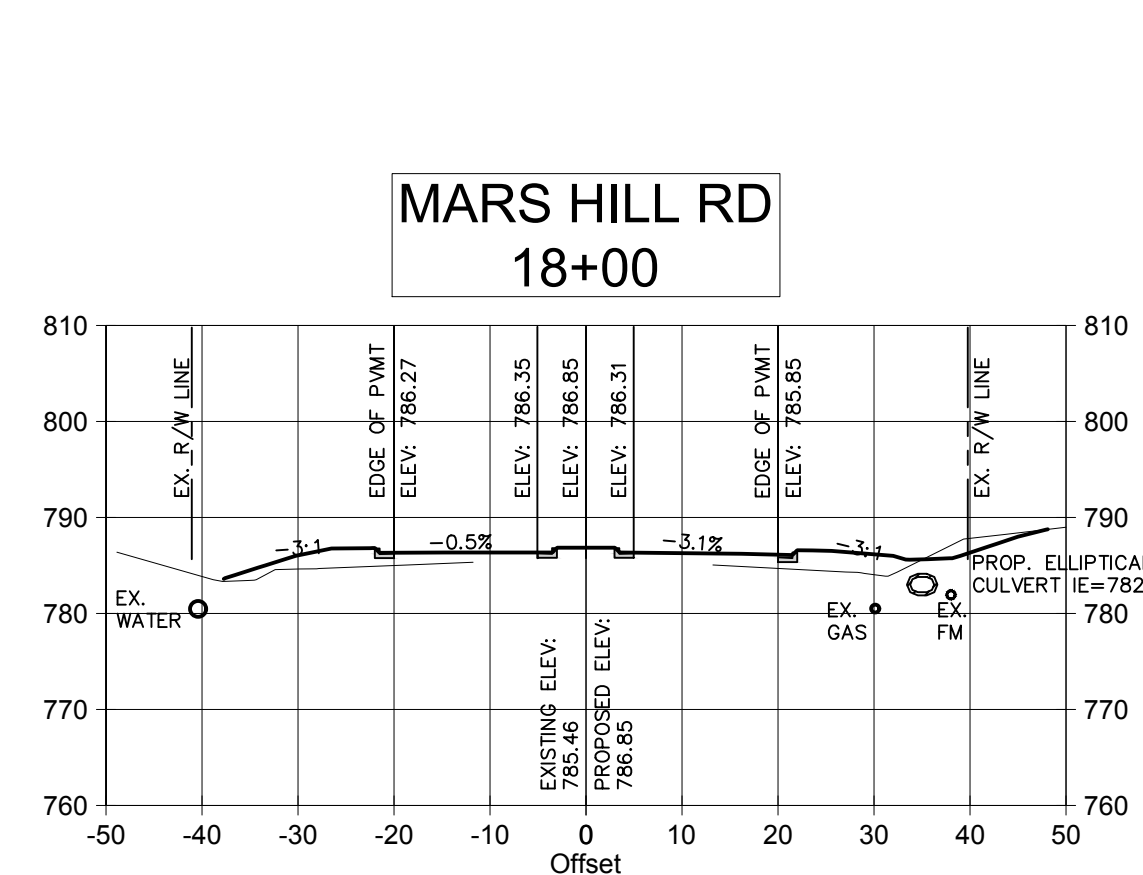
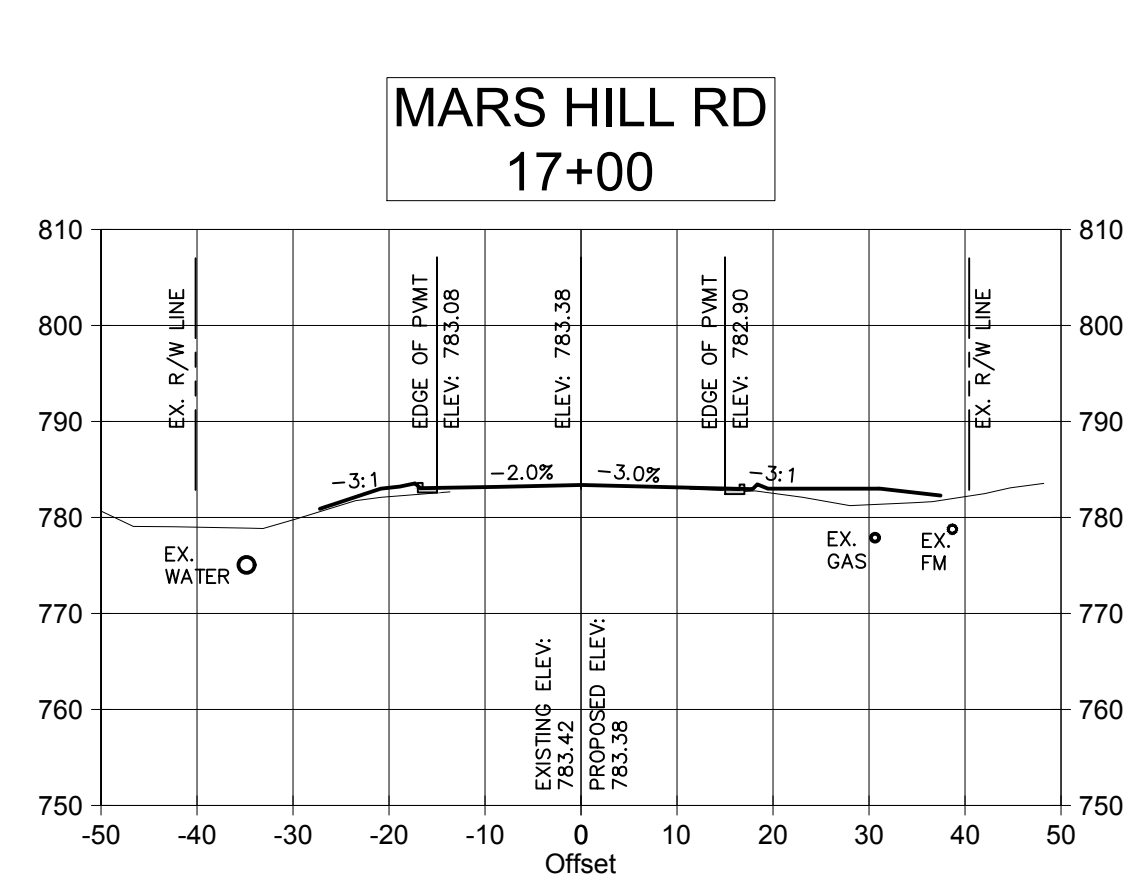
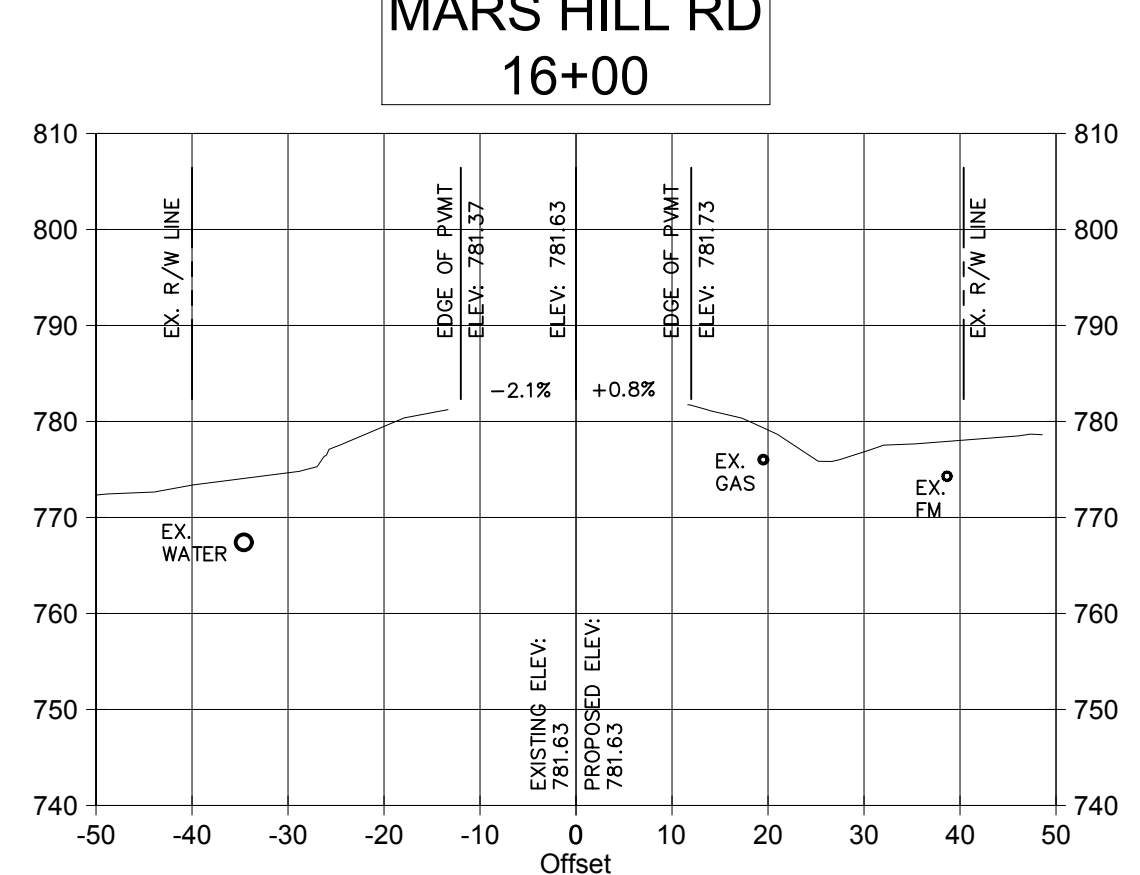
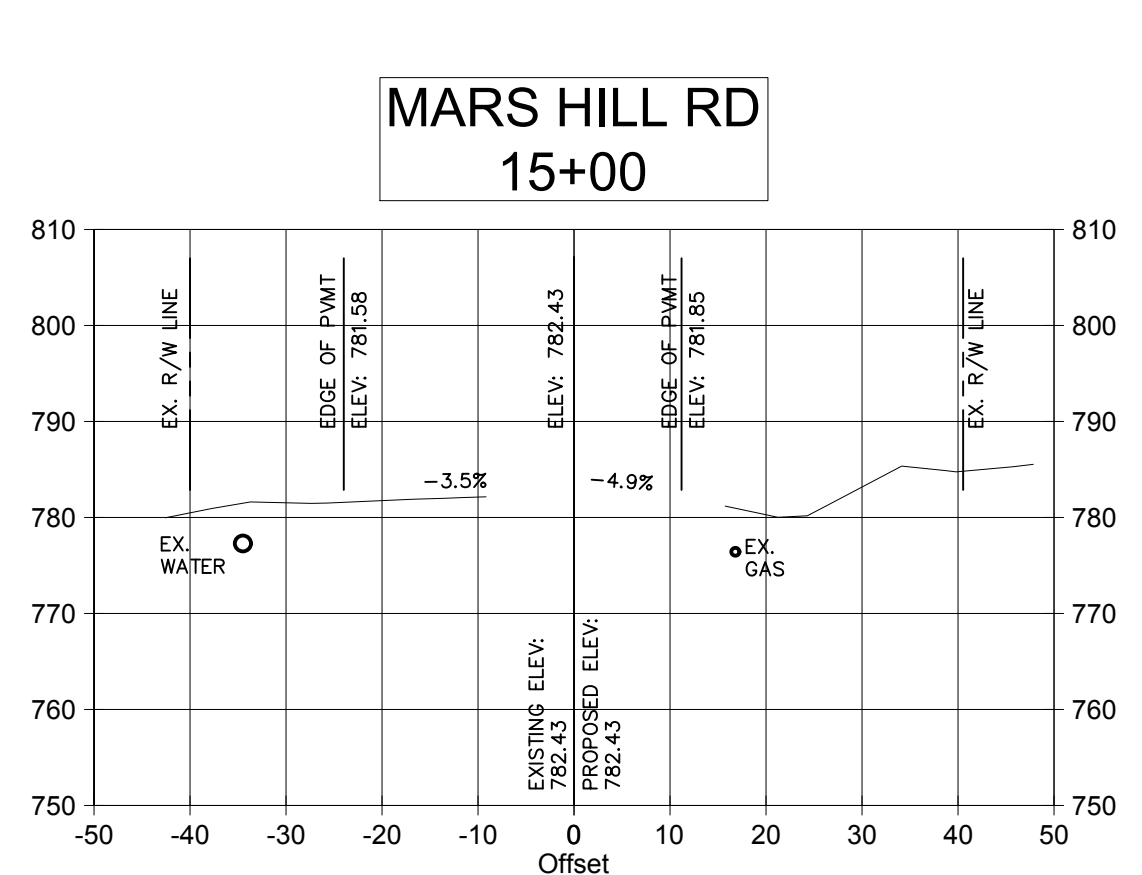
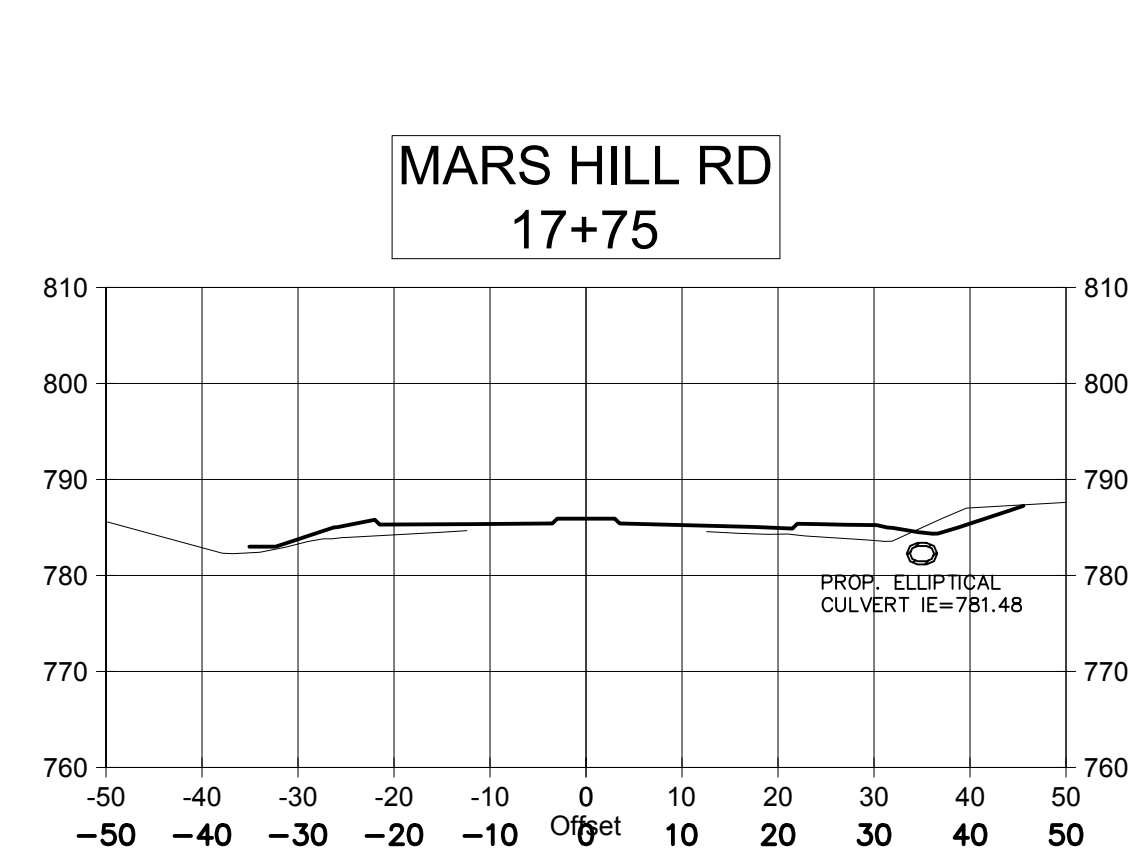
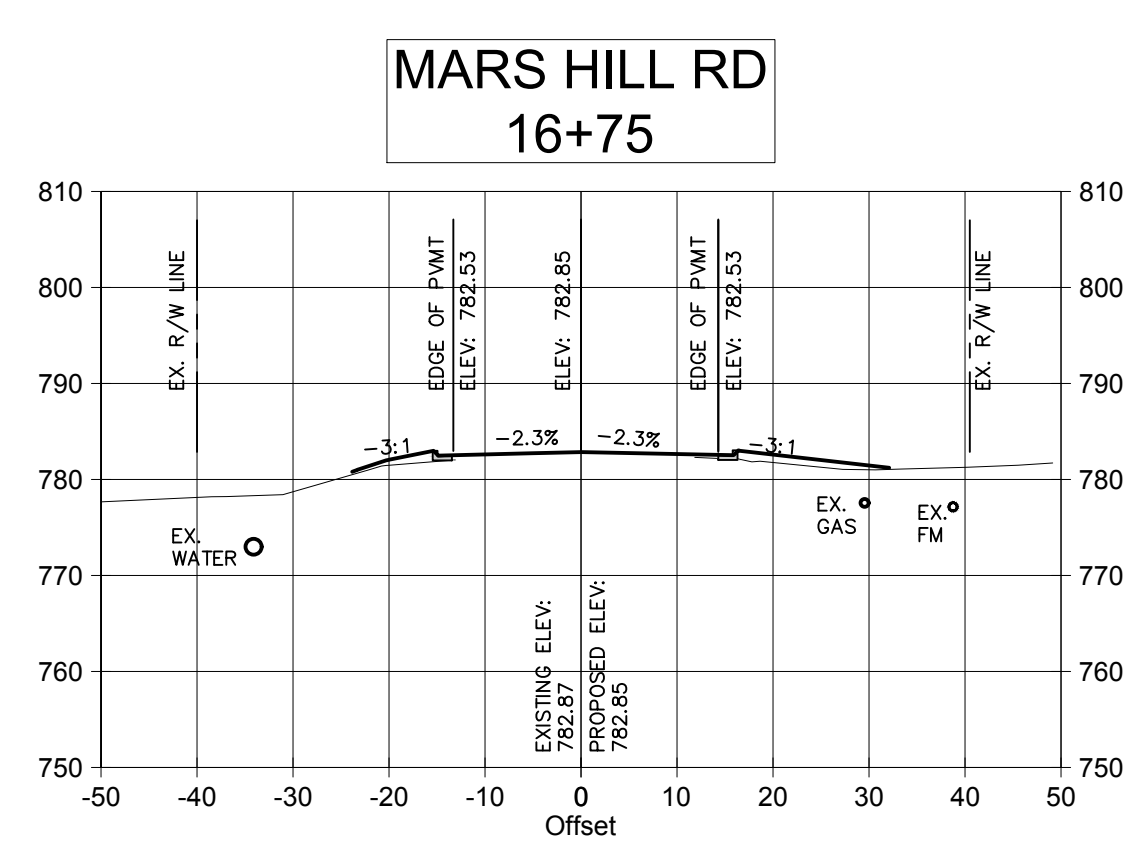
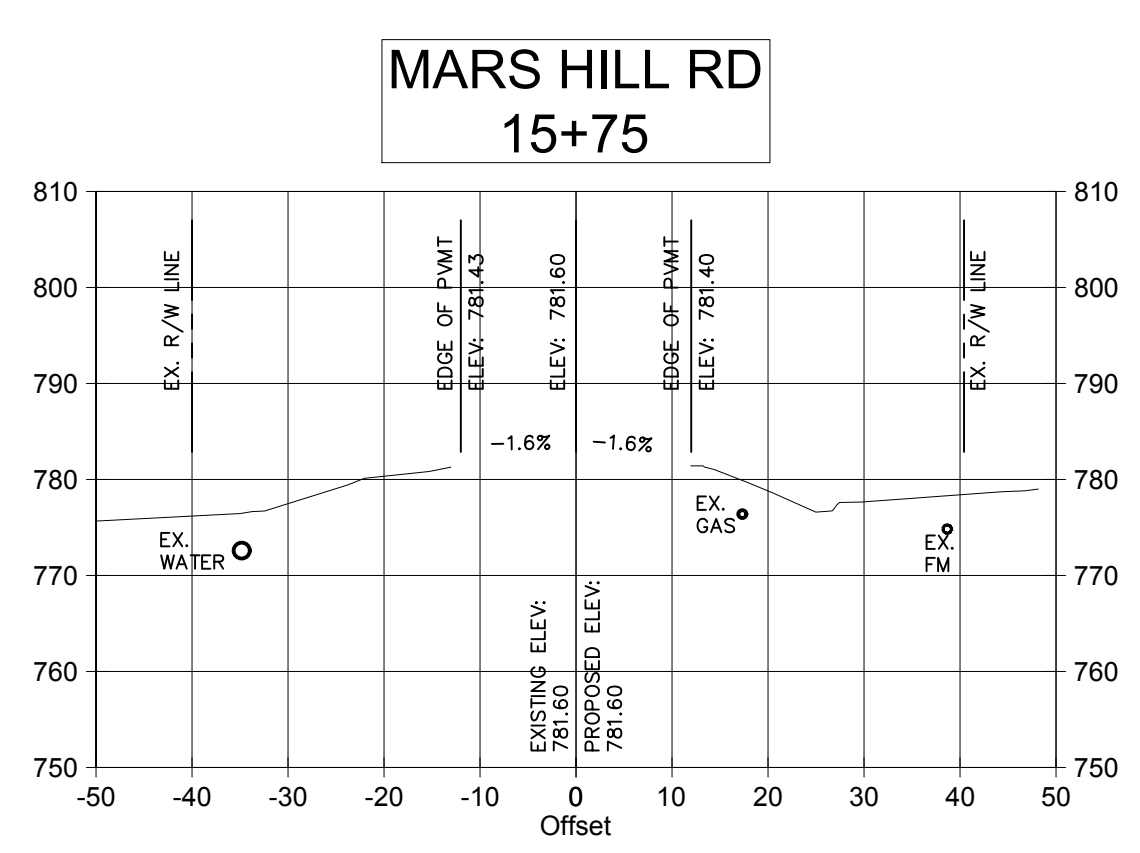
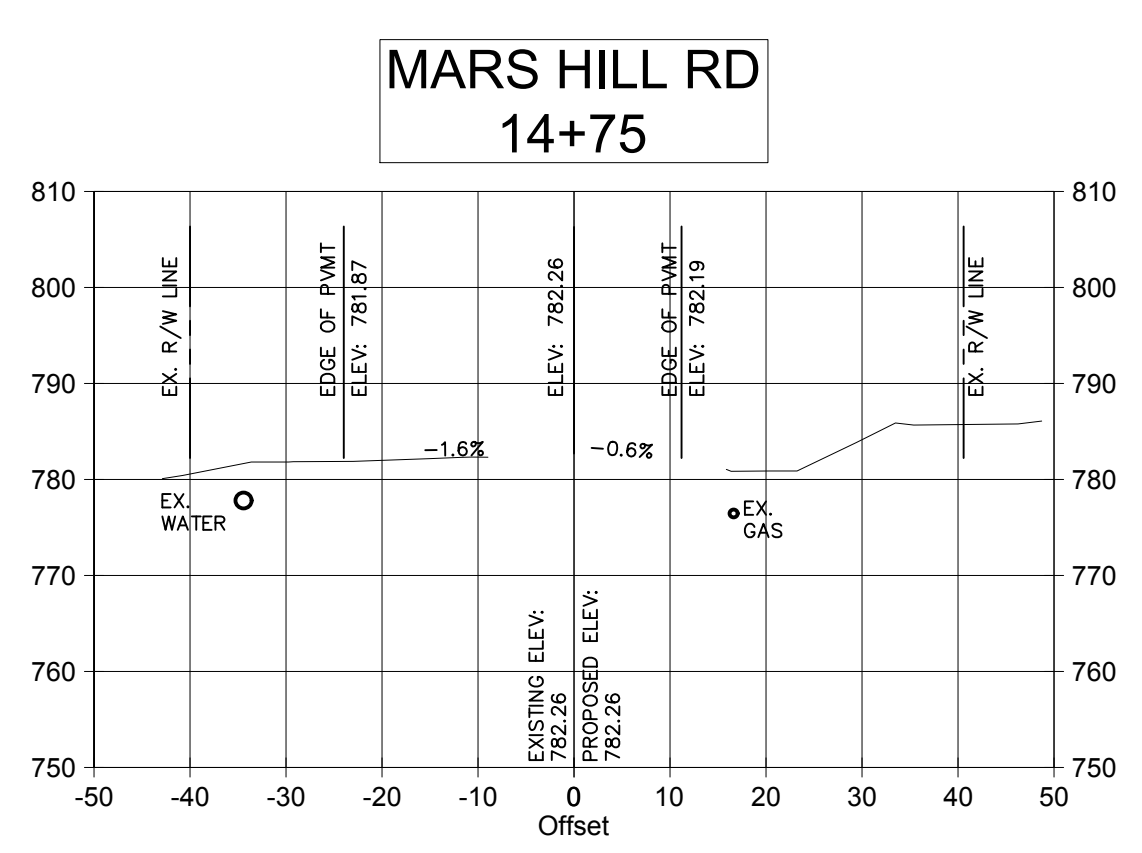
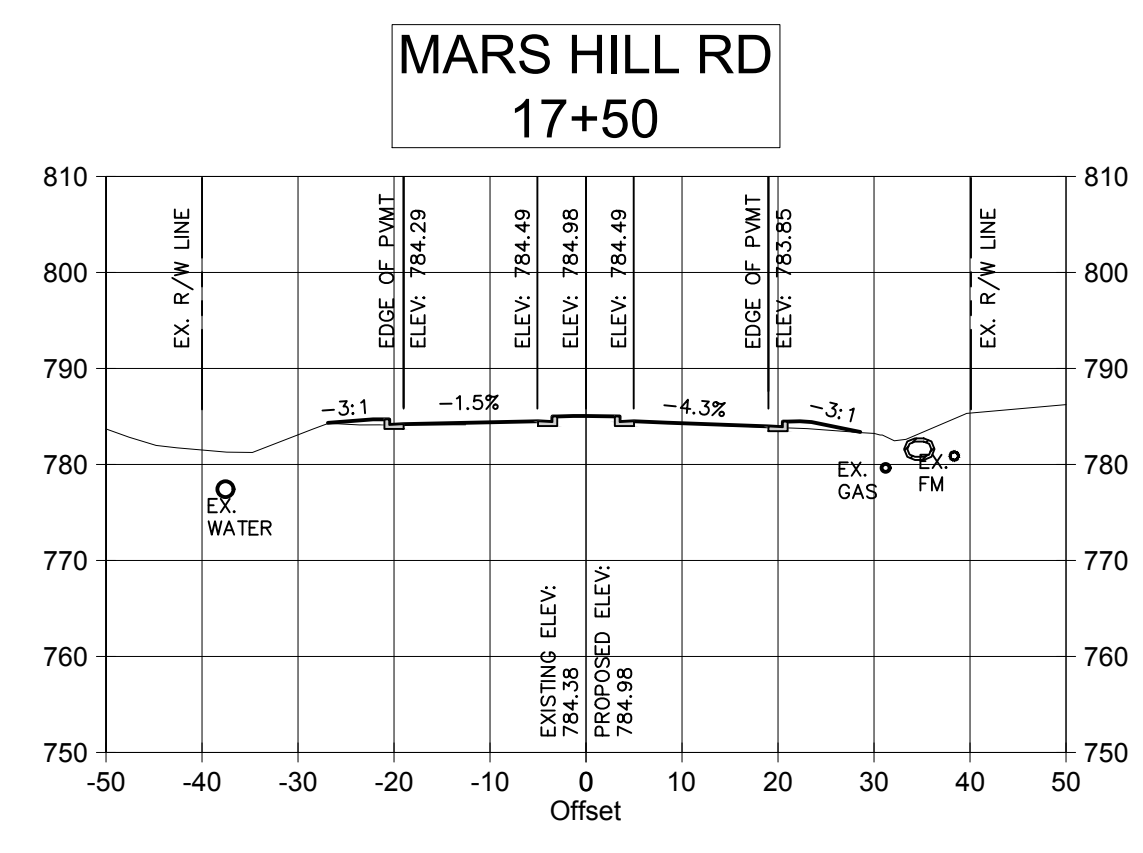
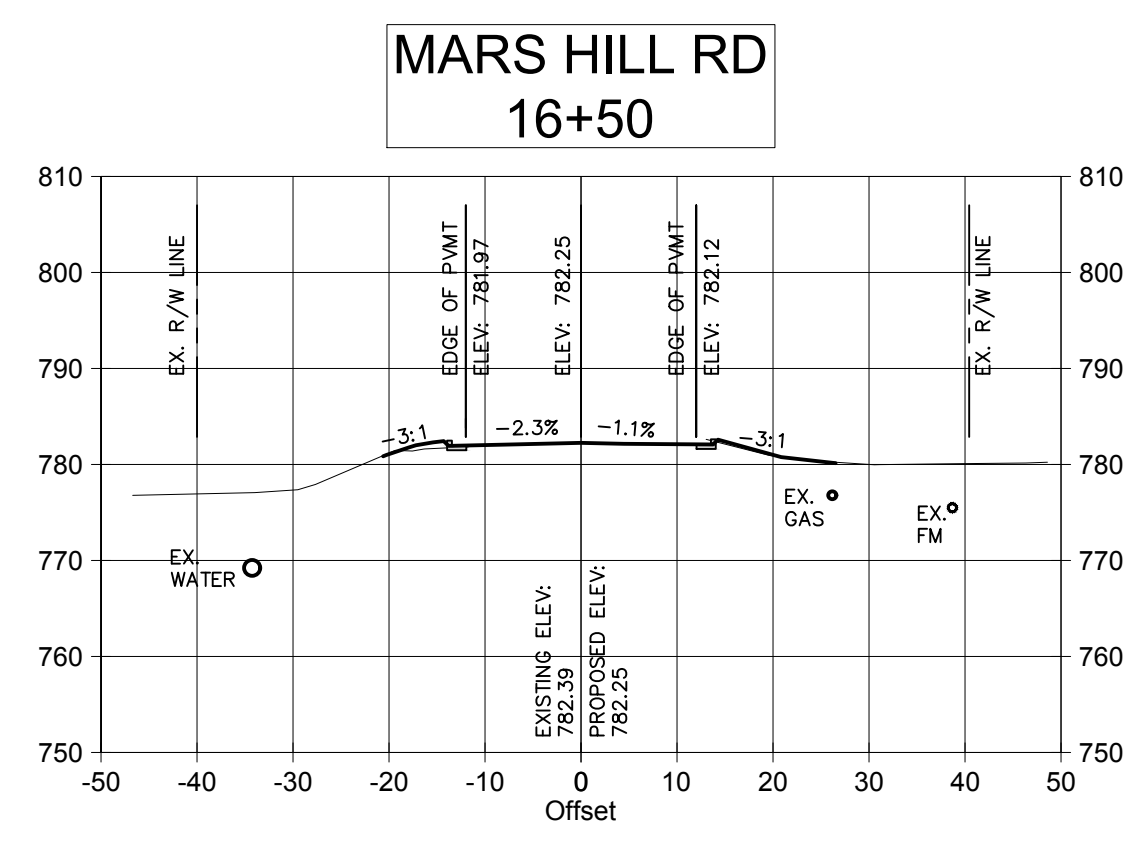
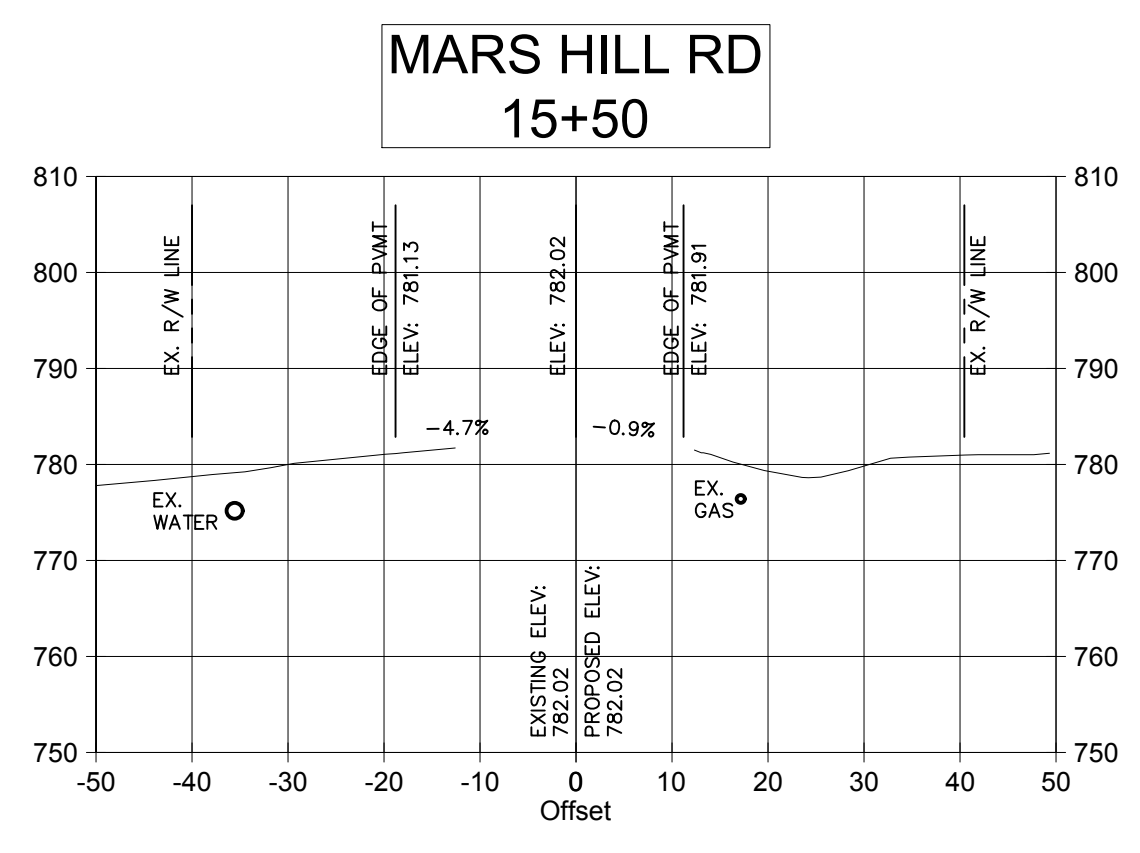
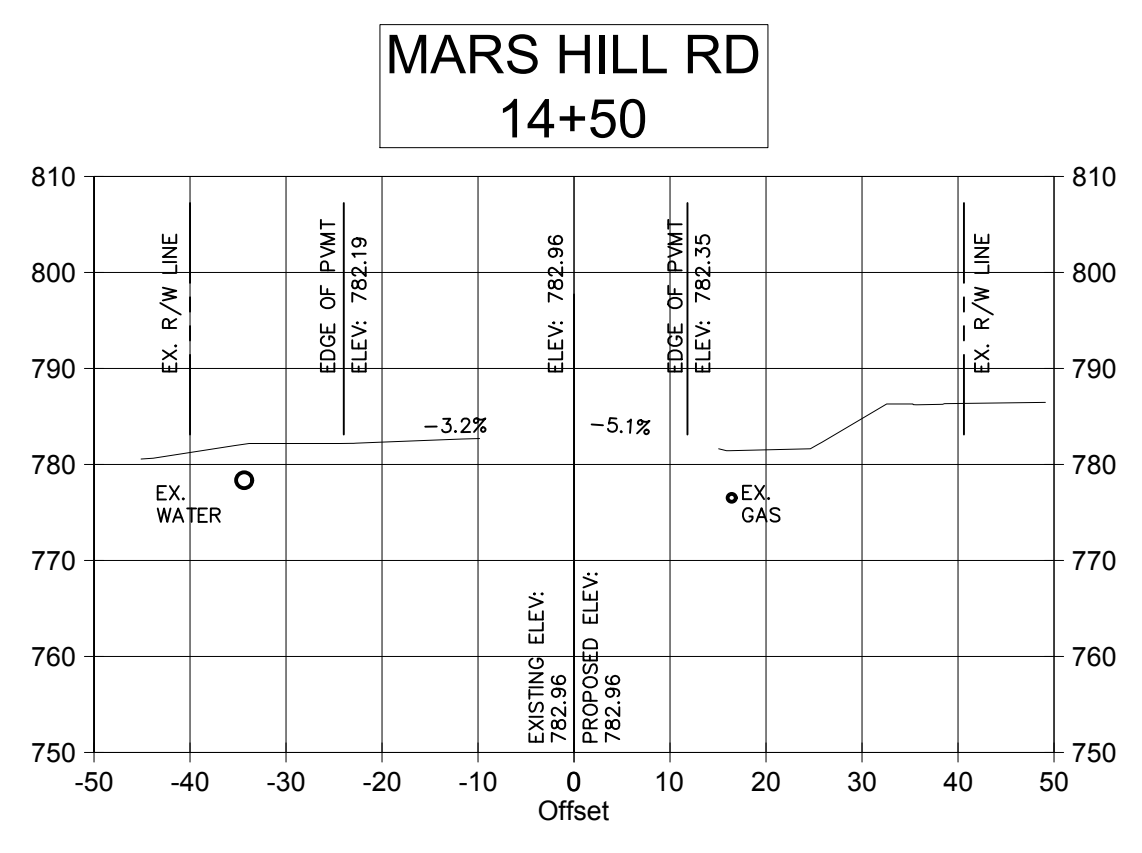
PROJECT NAME:
ROUNDABOUT PLANS

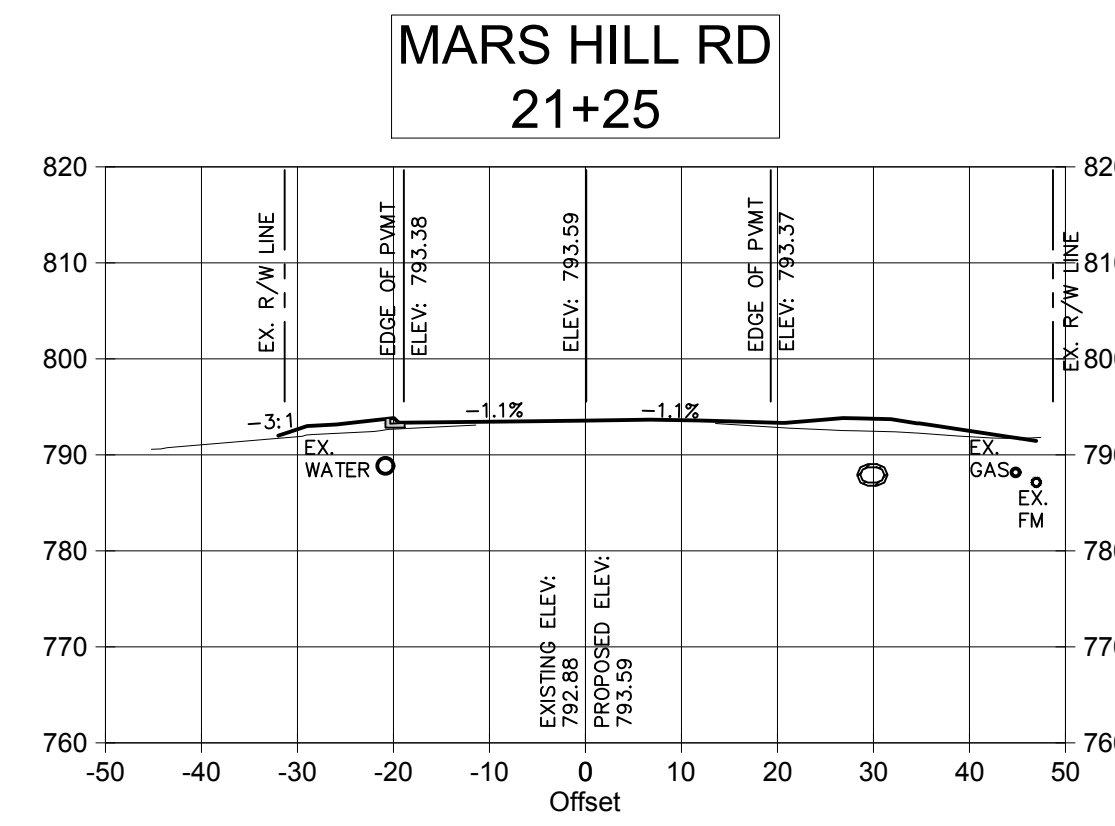
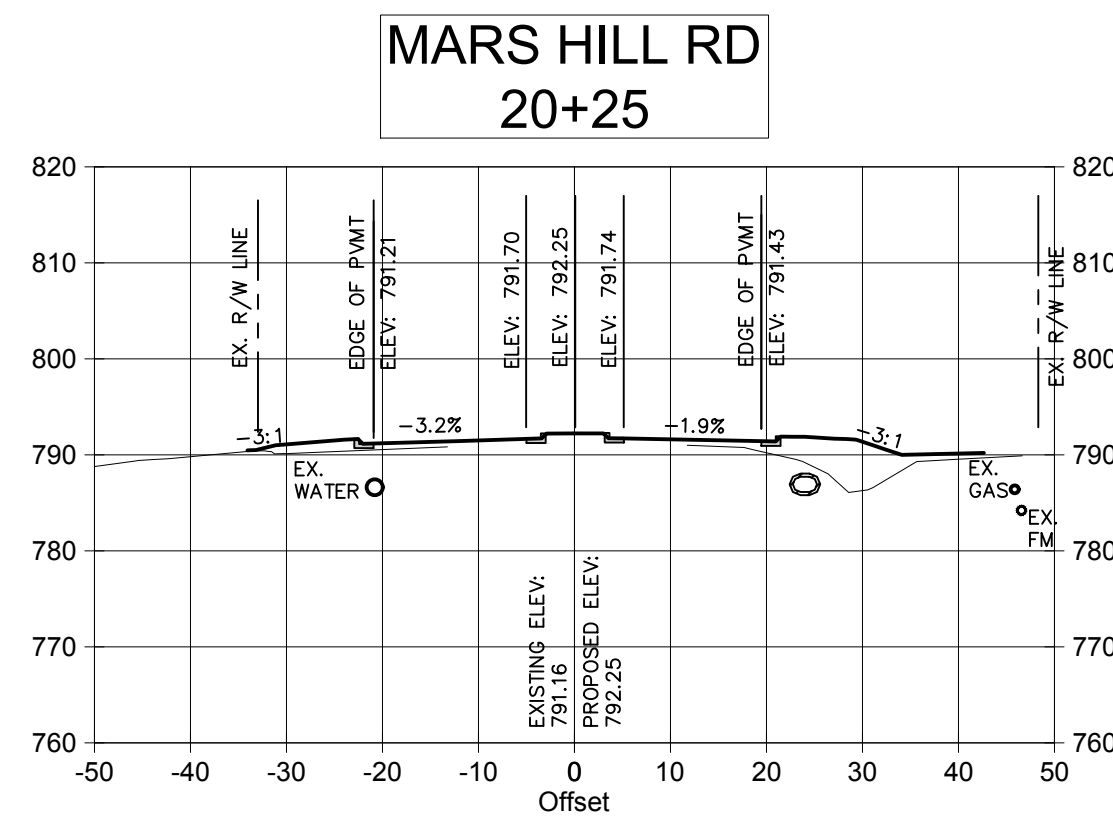
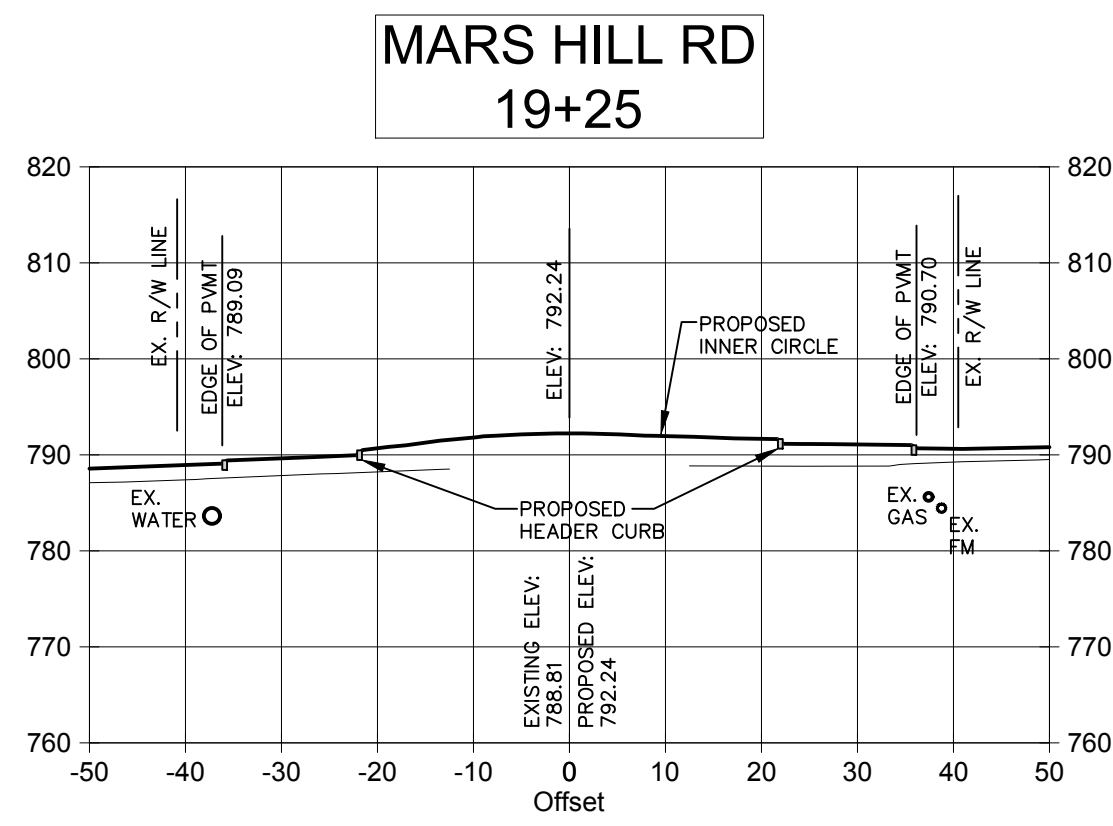
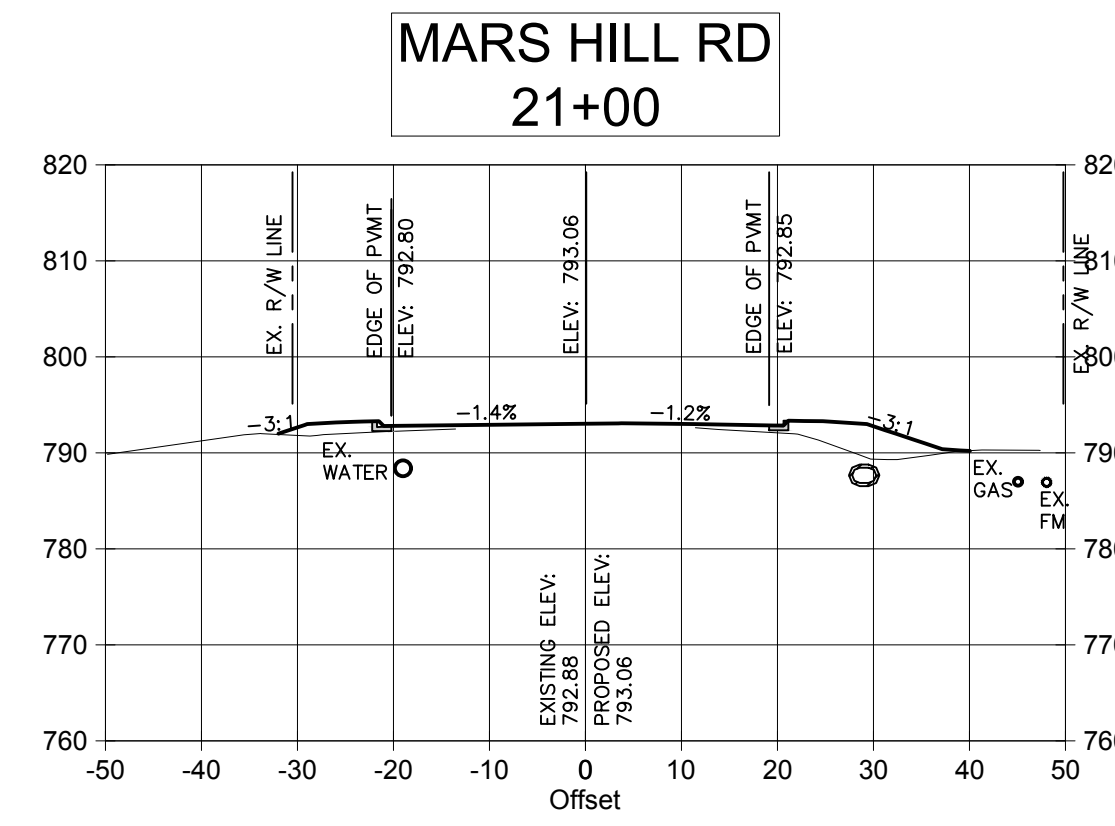
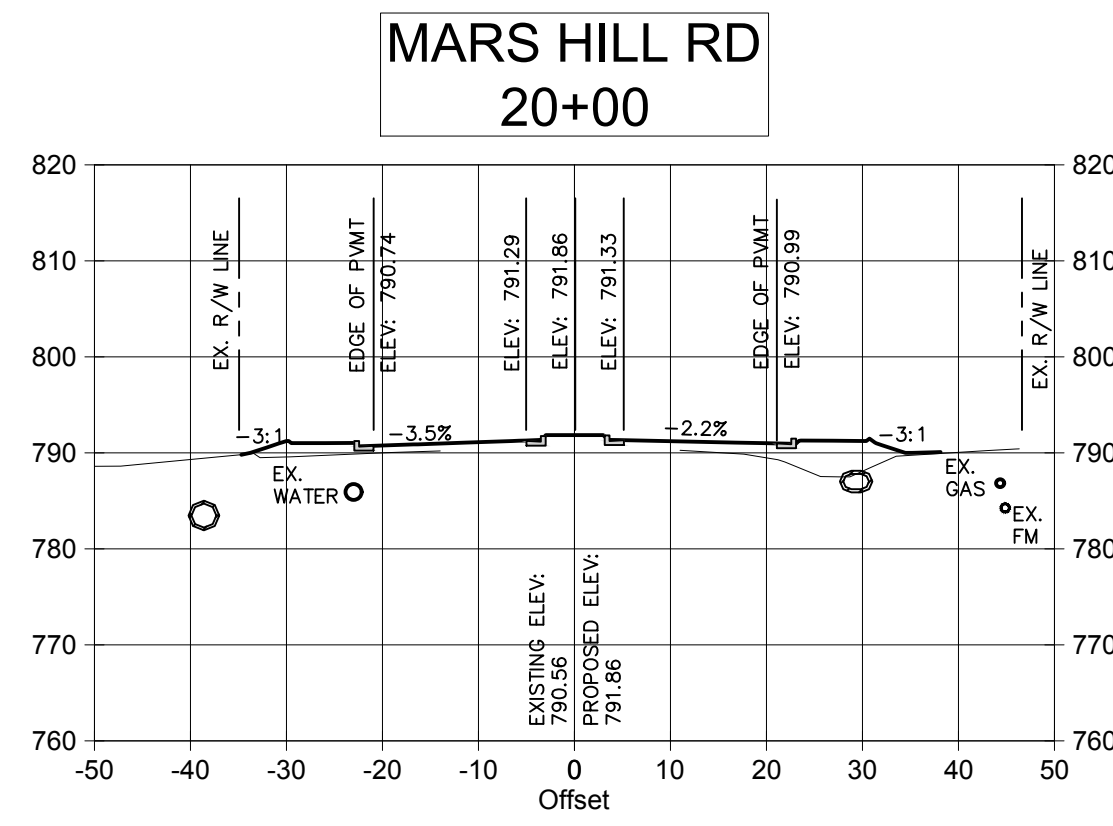
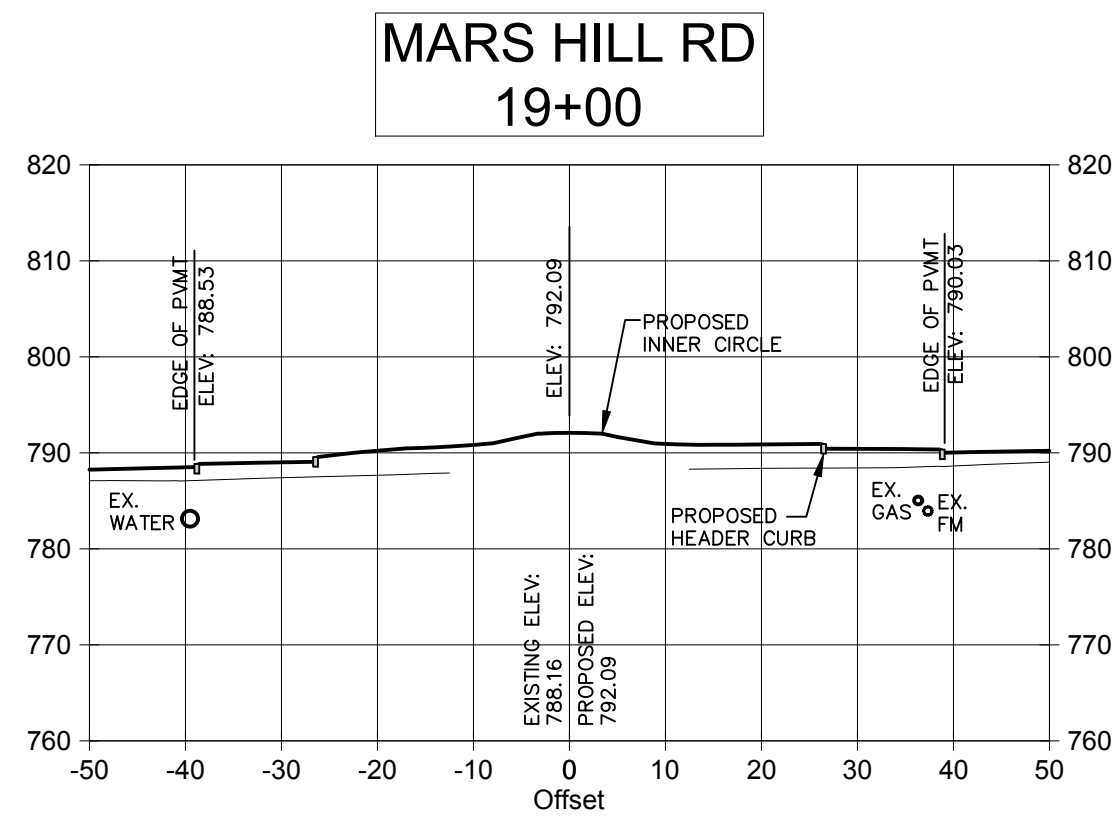
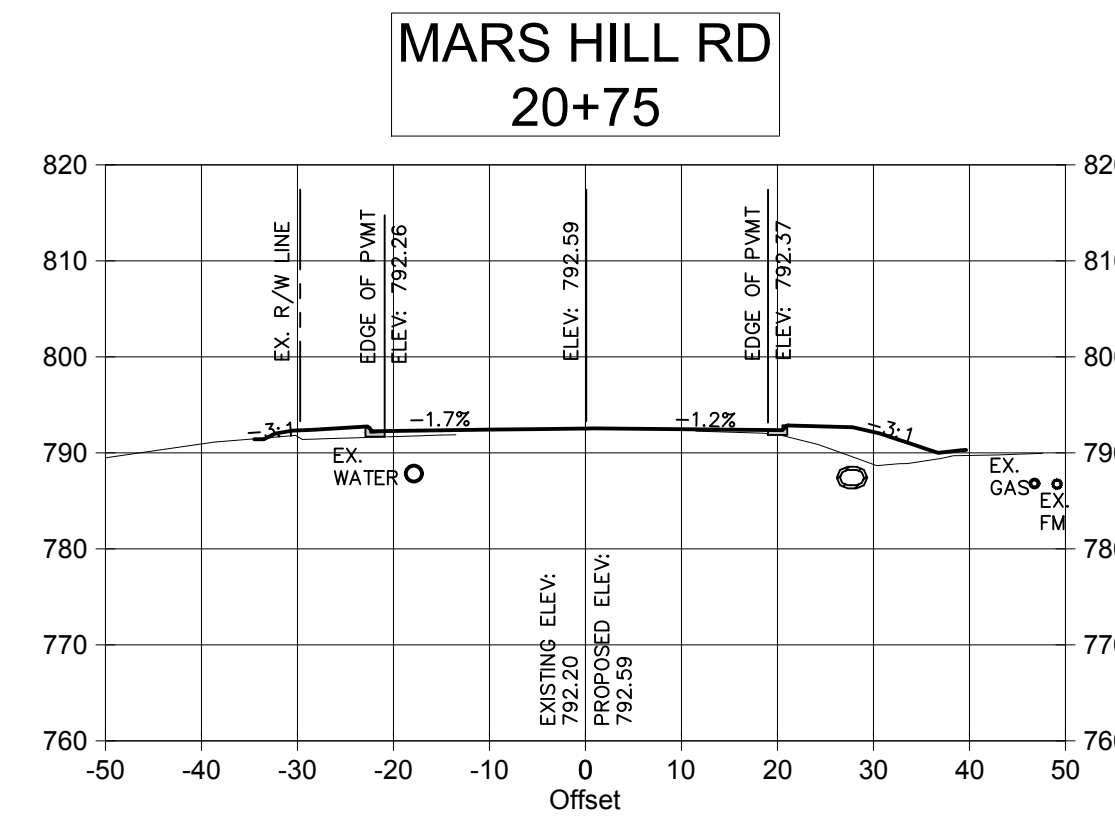
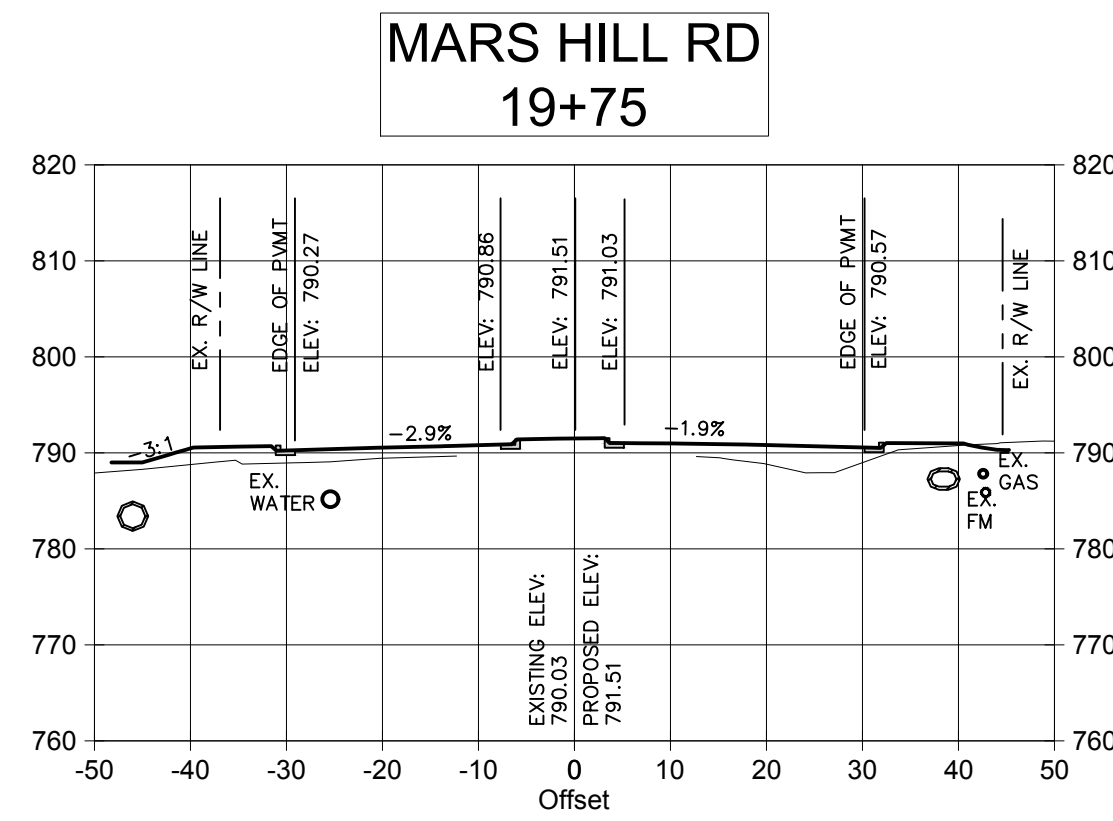
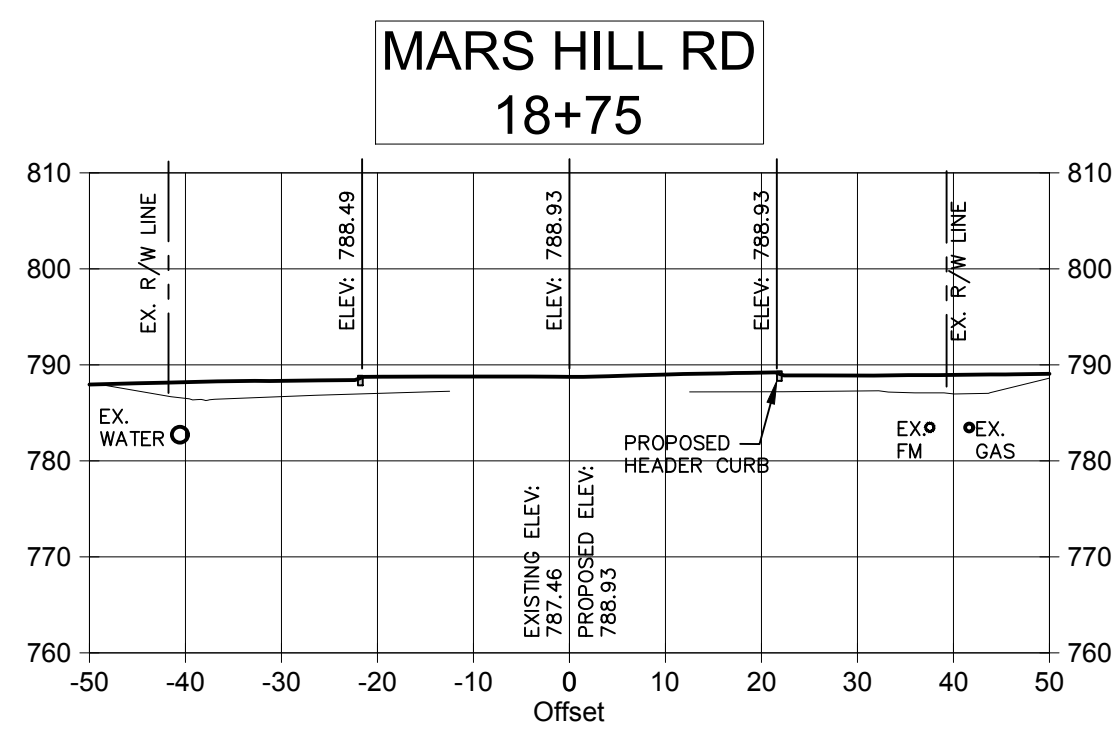
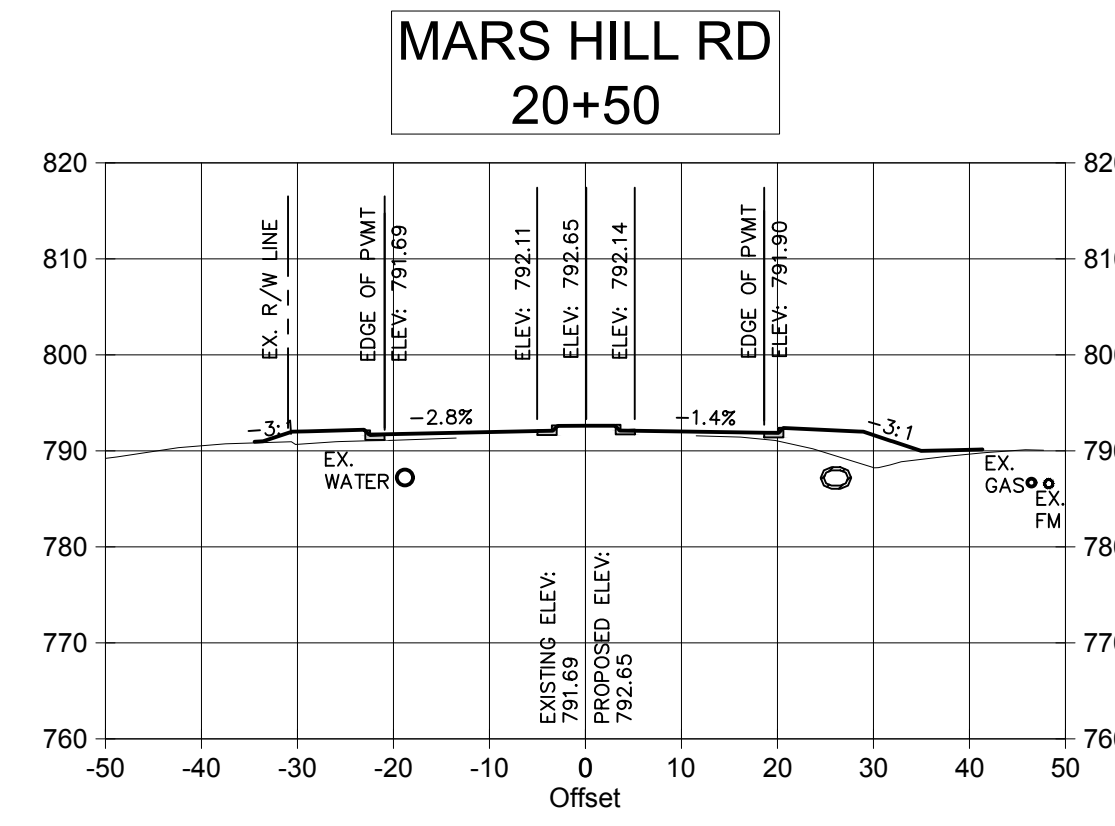
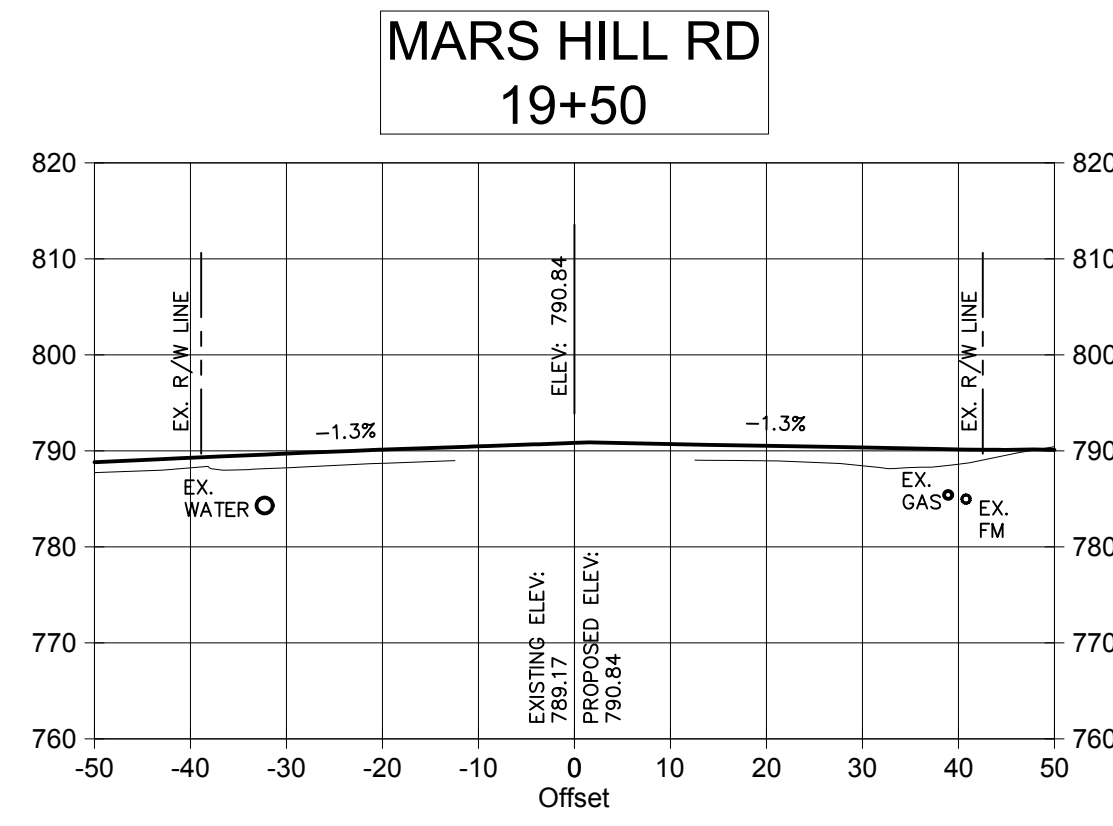
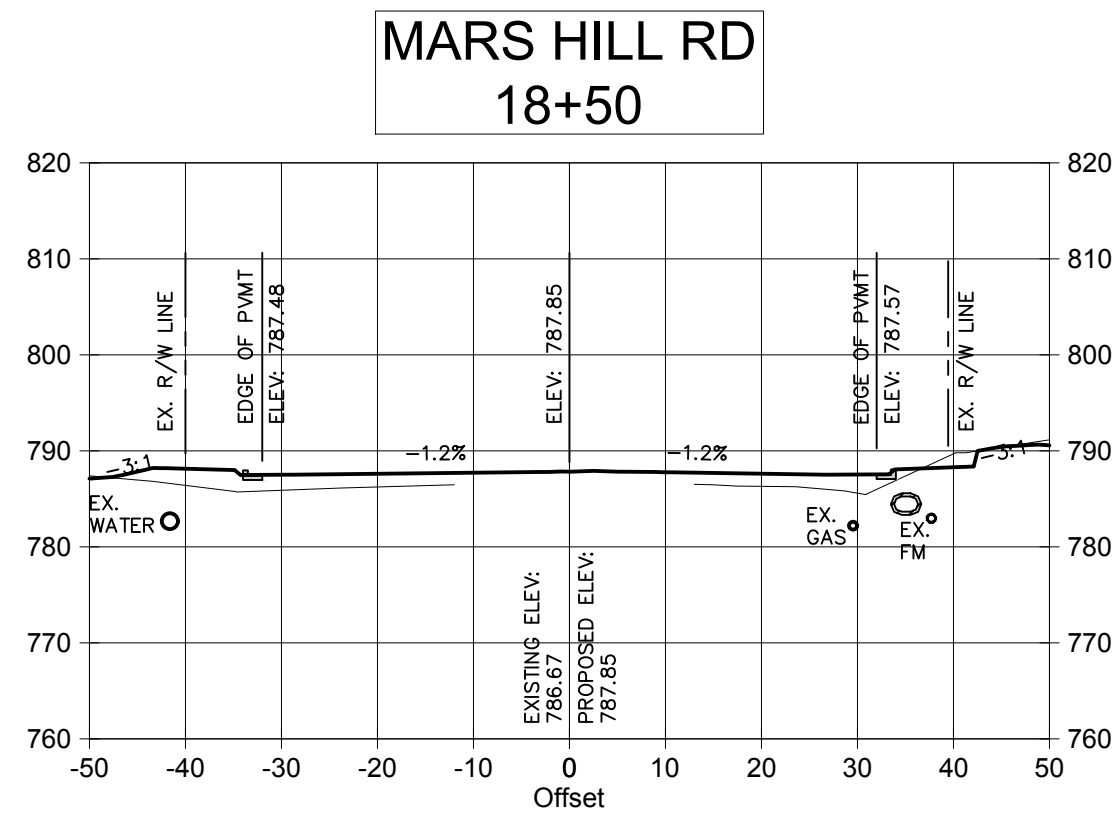
SHEET TITLE:
MARS HILL RD C.S.

SHEET NUMBER:
C-5.9

PROJECT NUMBER:
18001OCG

DATE:
04/01/19

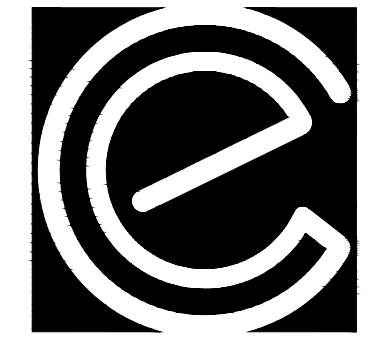




REVISION/	DATE	REVISION
INITIAL REVIEW	01/19/2019	



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ROUNDABOUT PLANS
for
OCONEE COUNTY GOVERNMENT
STAFF AND BUS ENTRANCE AND MALCOM BRIDGE RD.

PROJECT NAME:
**ROUNDABOUT
PLANS**

SHEET TITLE:
**MARS HILL RD
C.S.**

SHEET NUMBER:
C-5.10

PROJECT NUMBER:
18001OCG

DATE:
04/01/19

REVISION/NO.	DATE	REVISION
1	01/19/2019	INITIAL REVIEW



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OCONEE COUNTY GOVERNMENT
STAFF AND BUS ENTRANCE AND MALCOM BRIDGE RD.

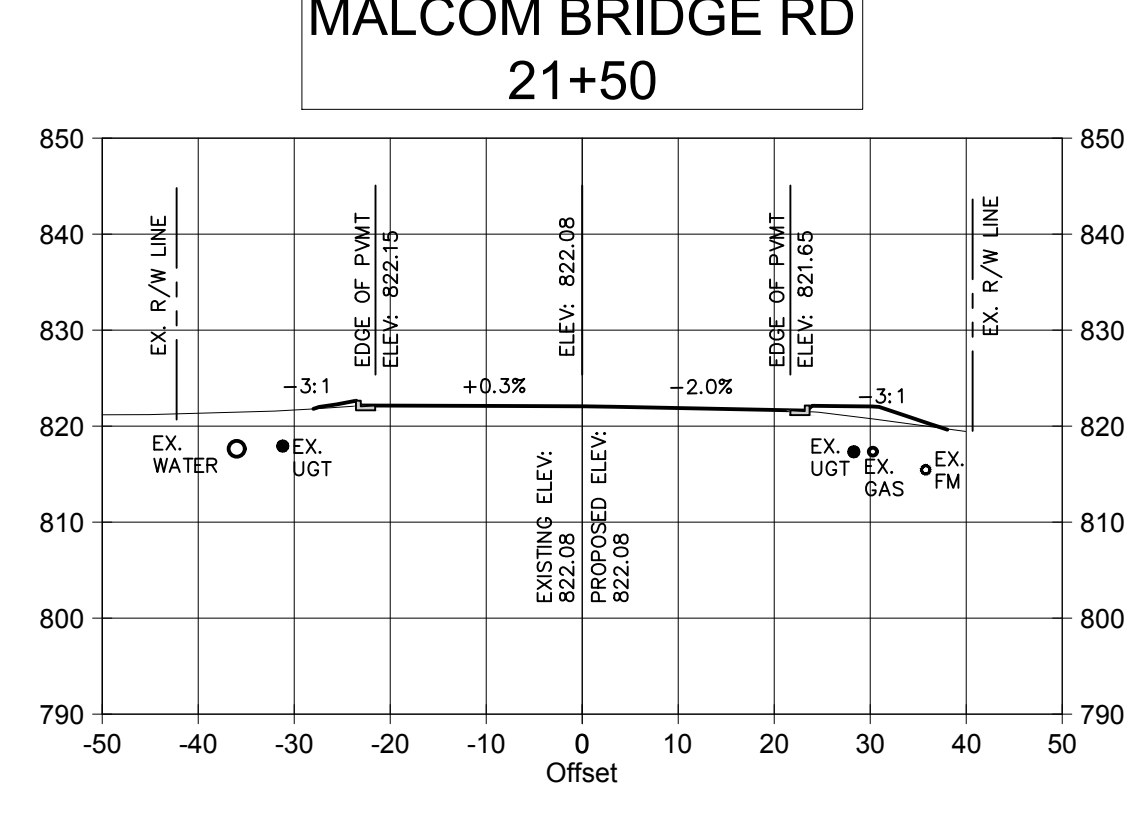
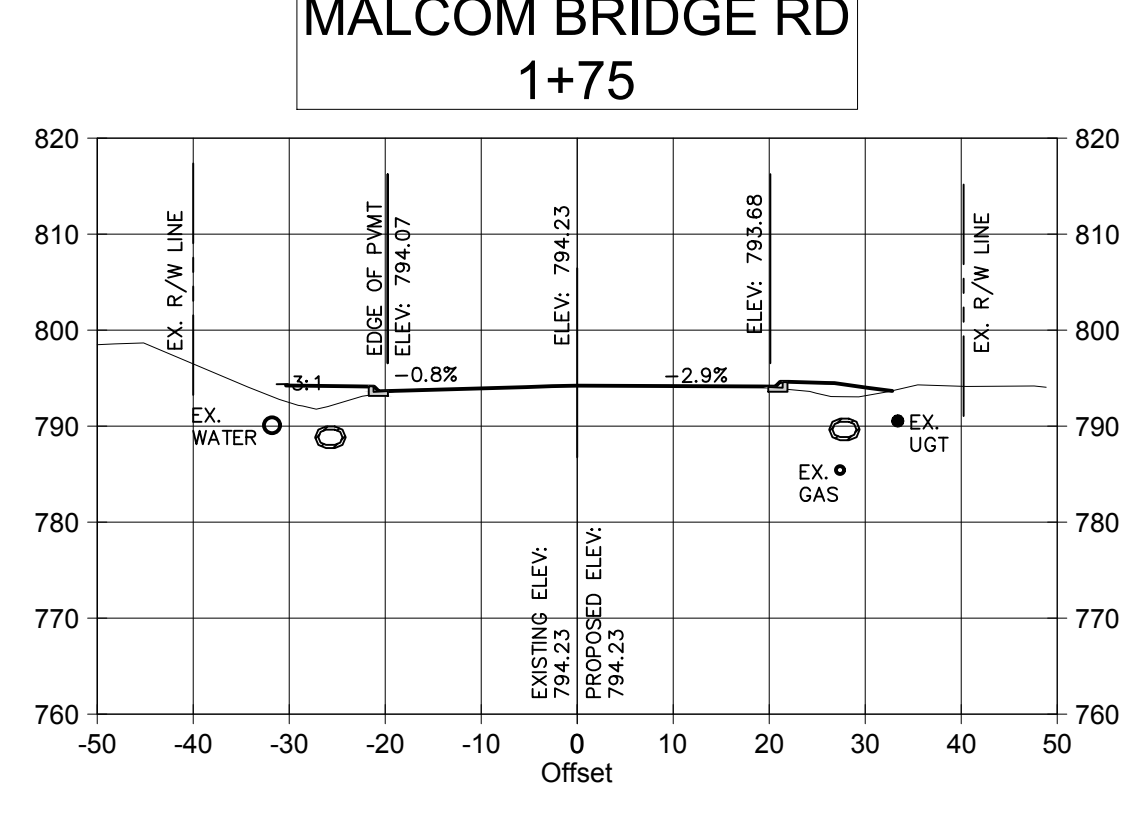
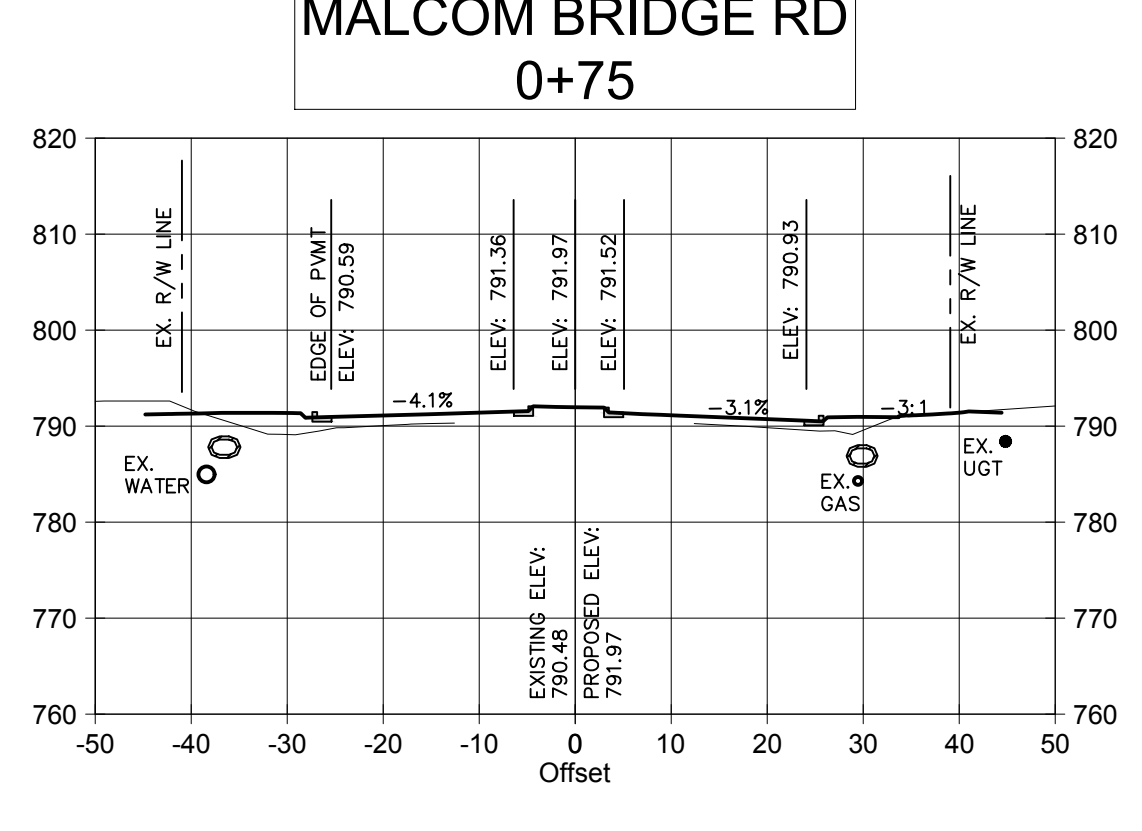
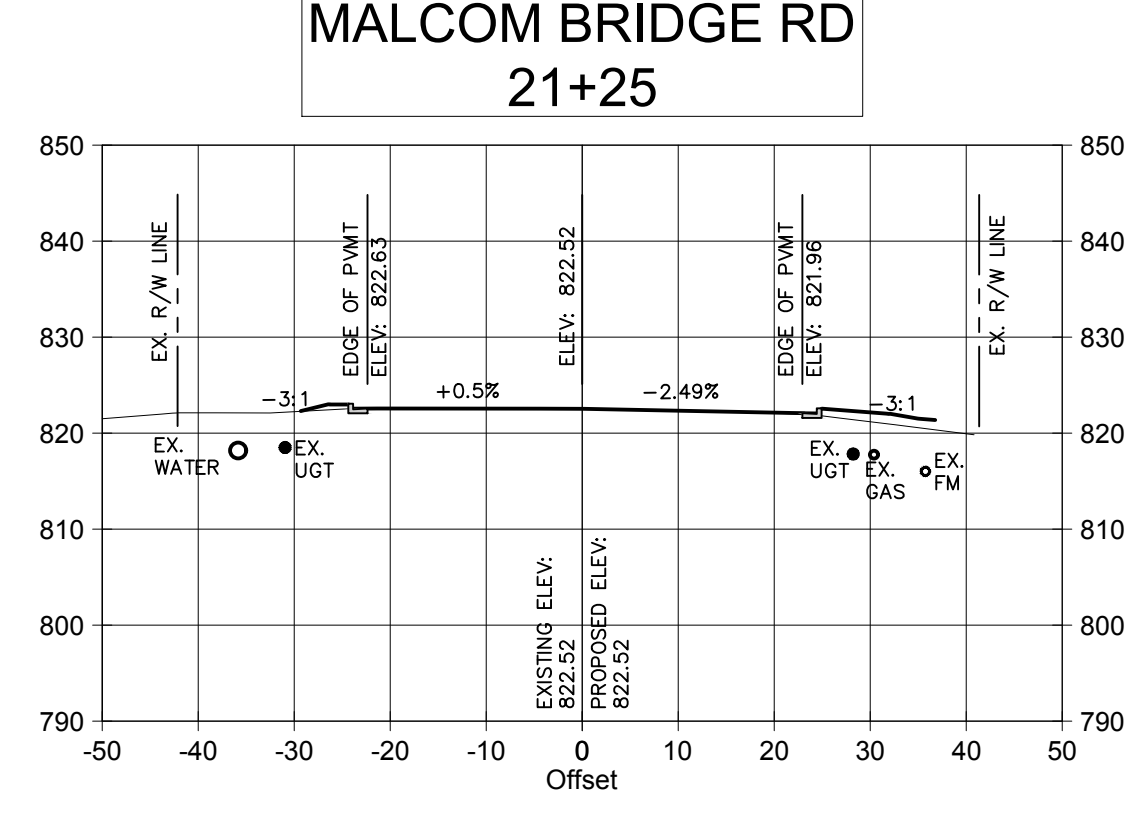
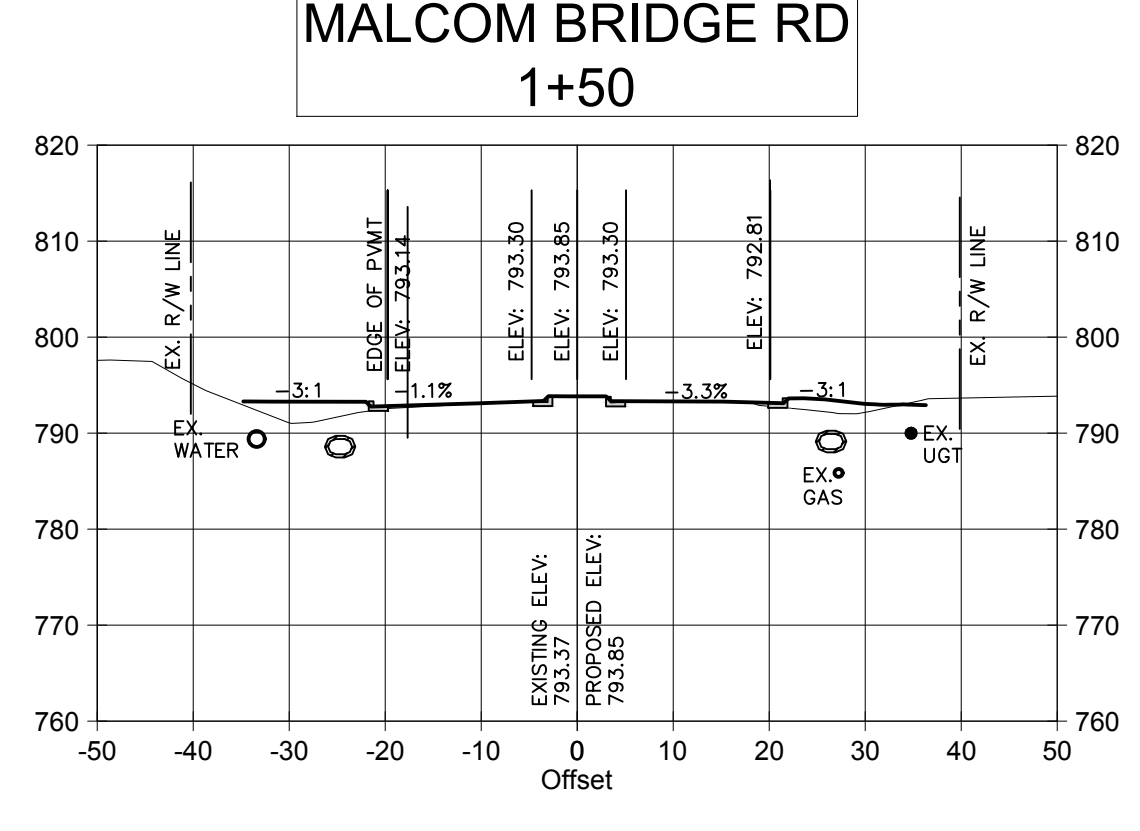
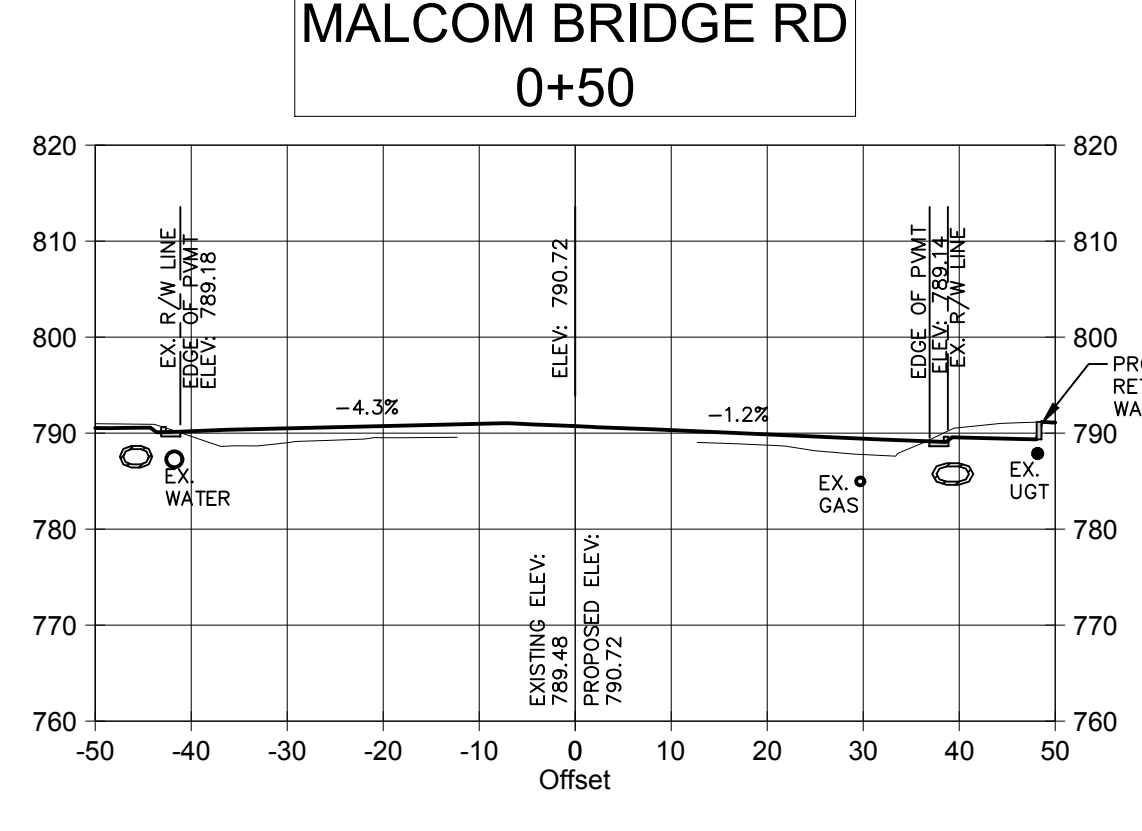
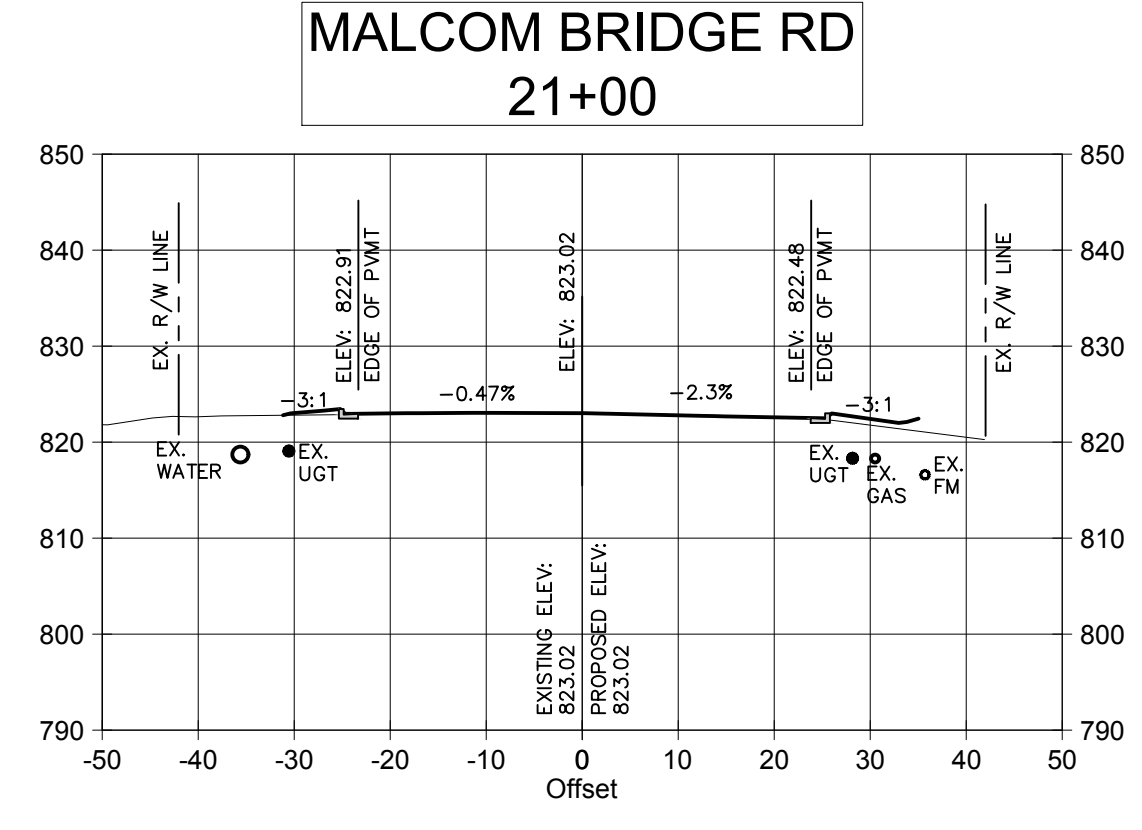
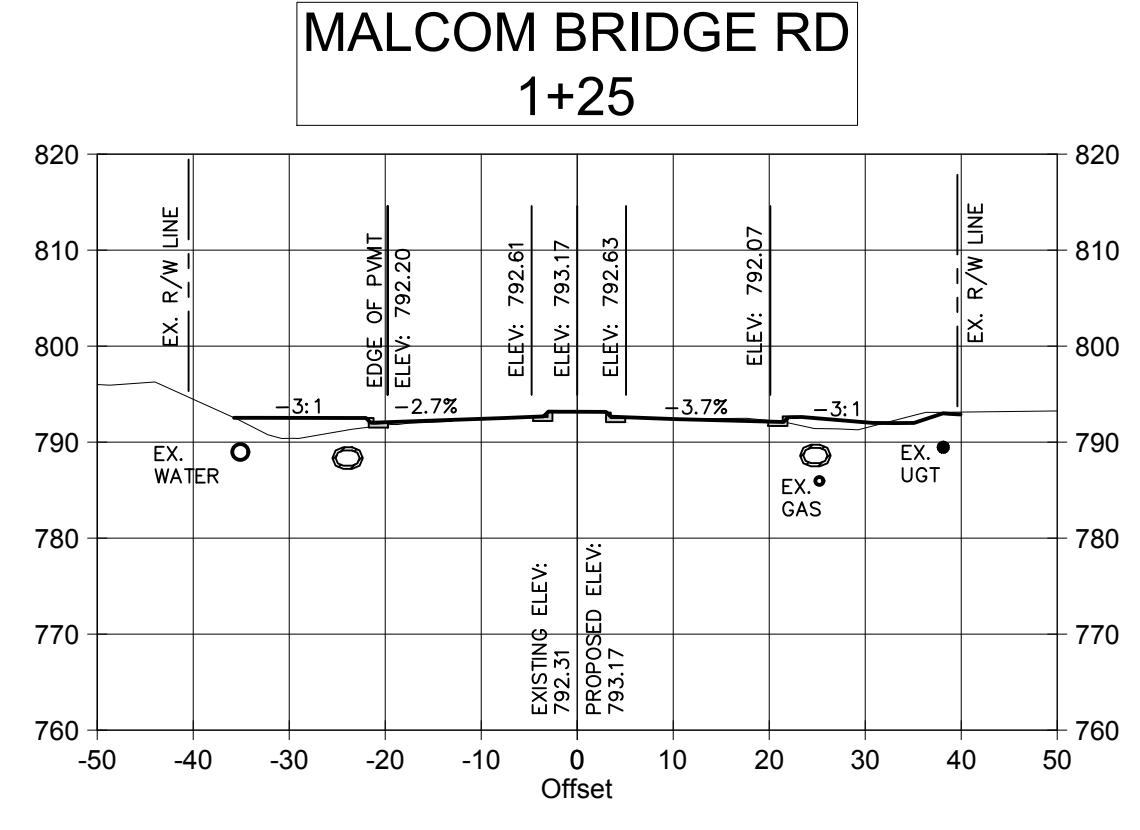
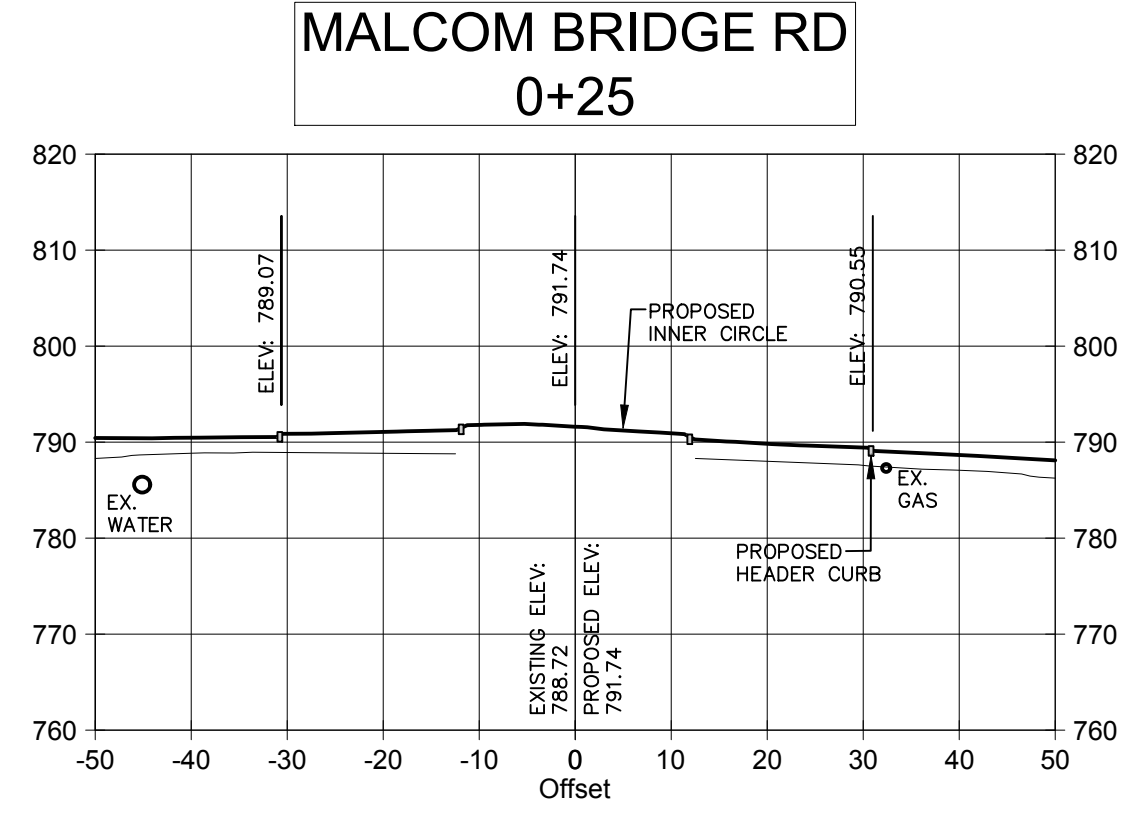
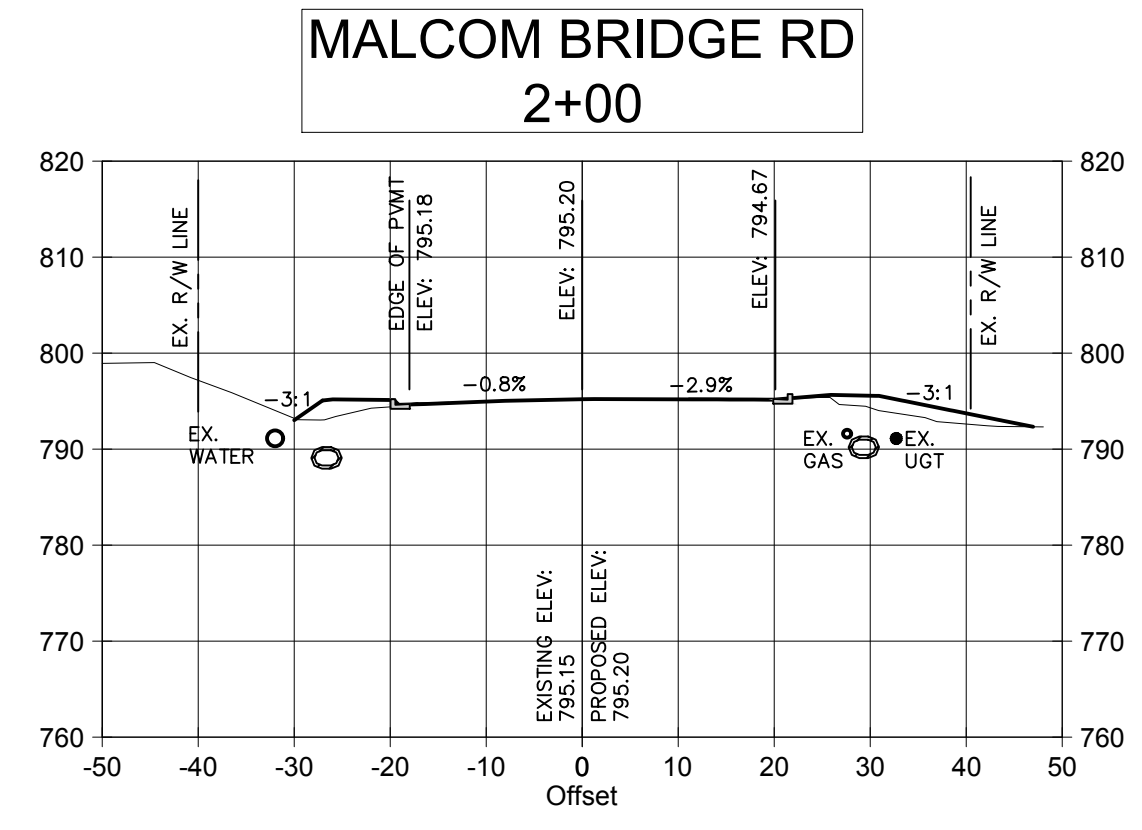
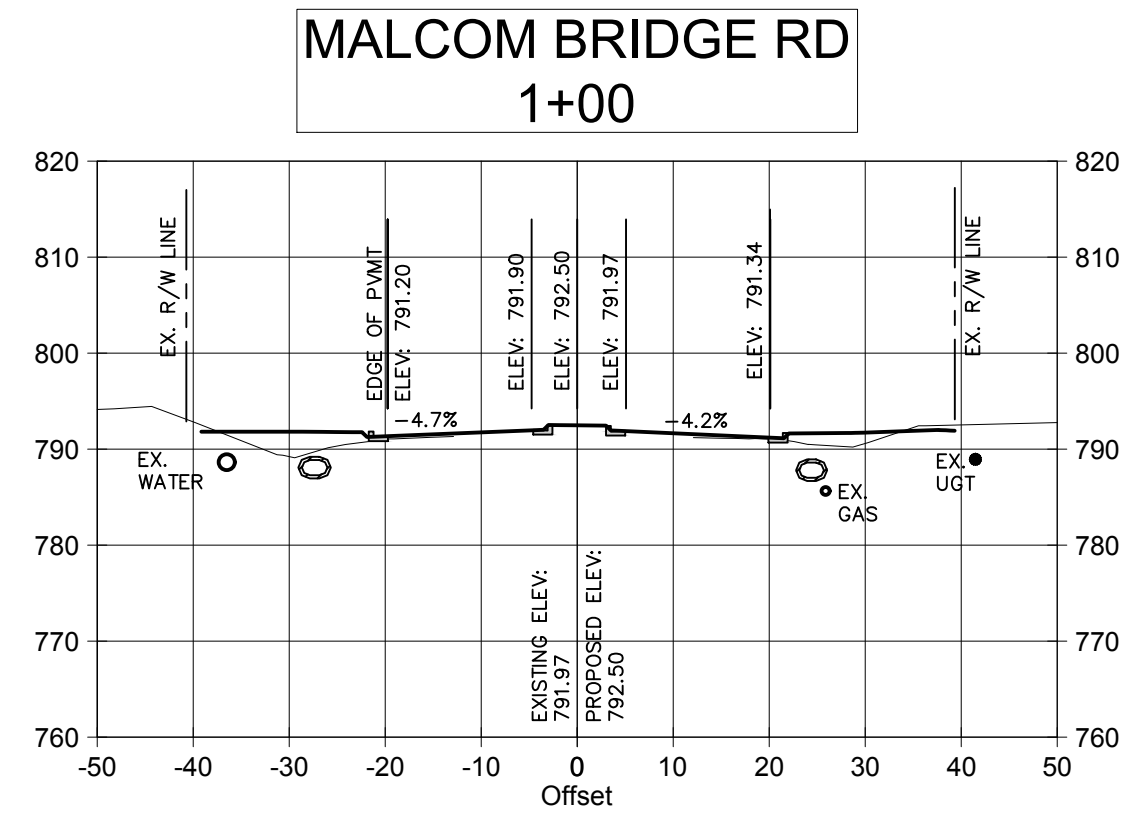
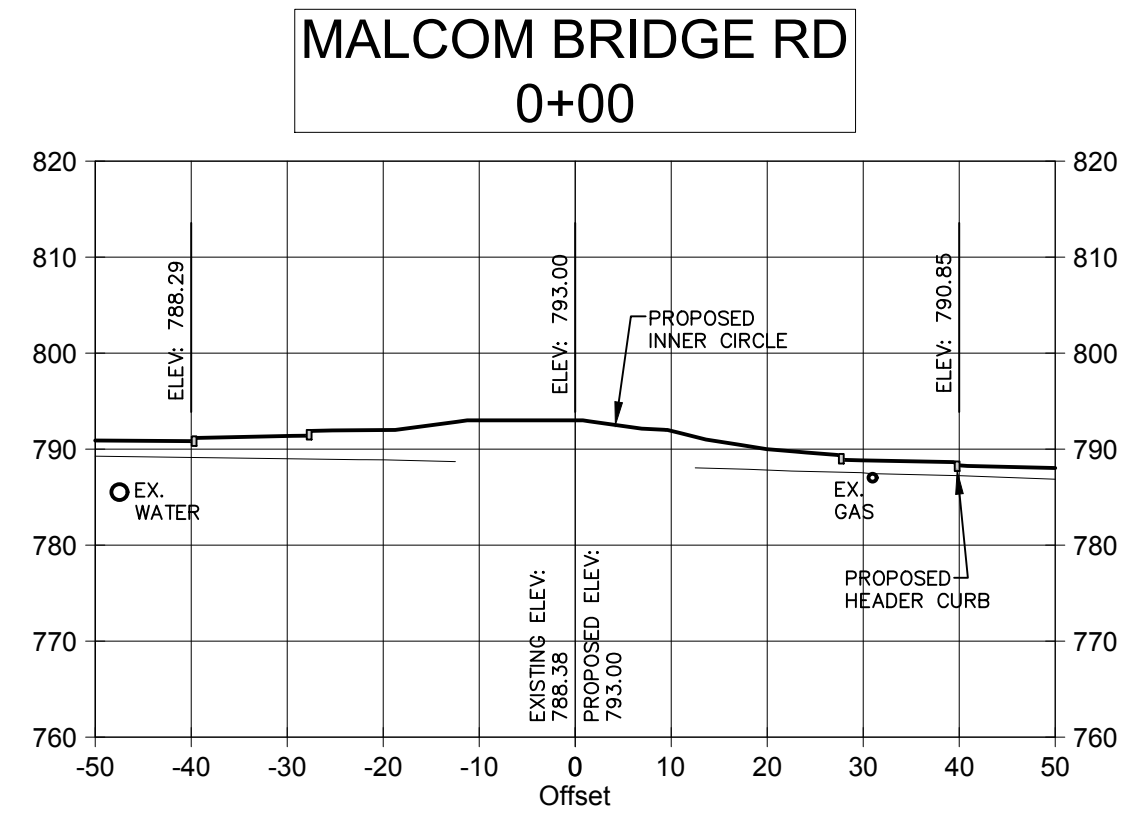
PROJECT NAME:
ROUNDABOUT PLANS

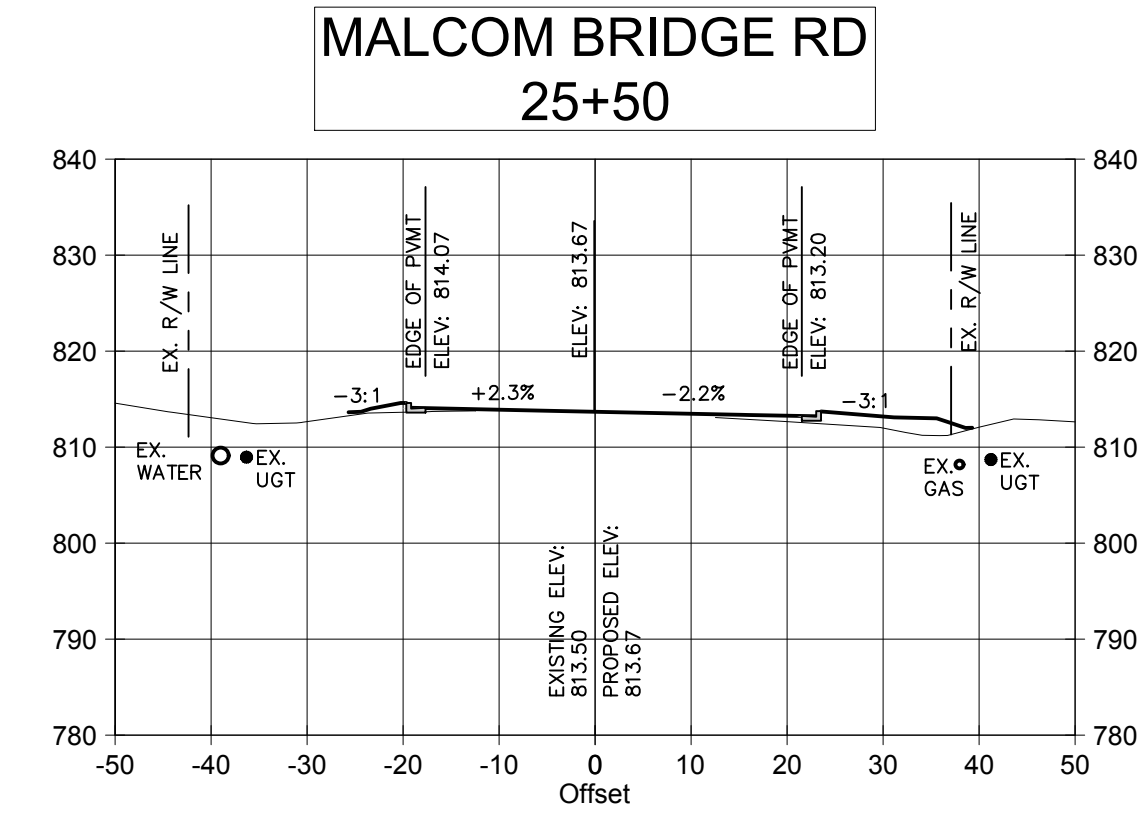
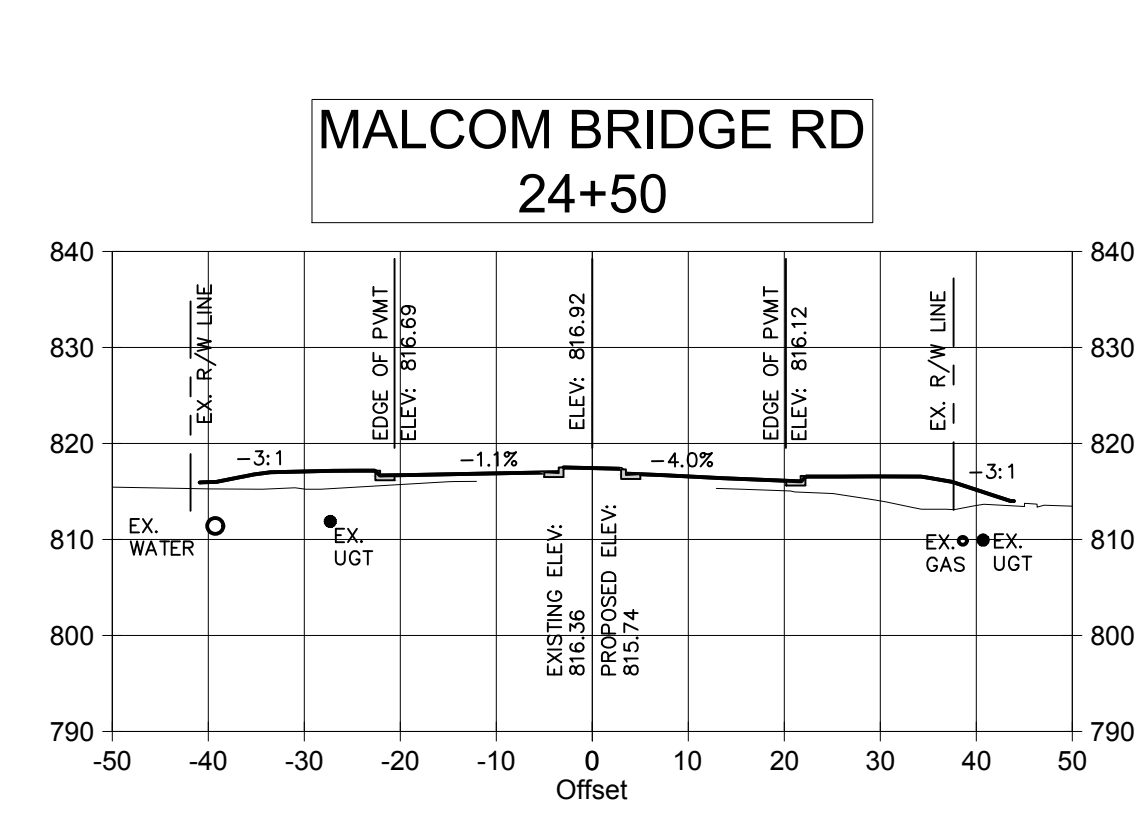
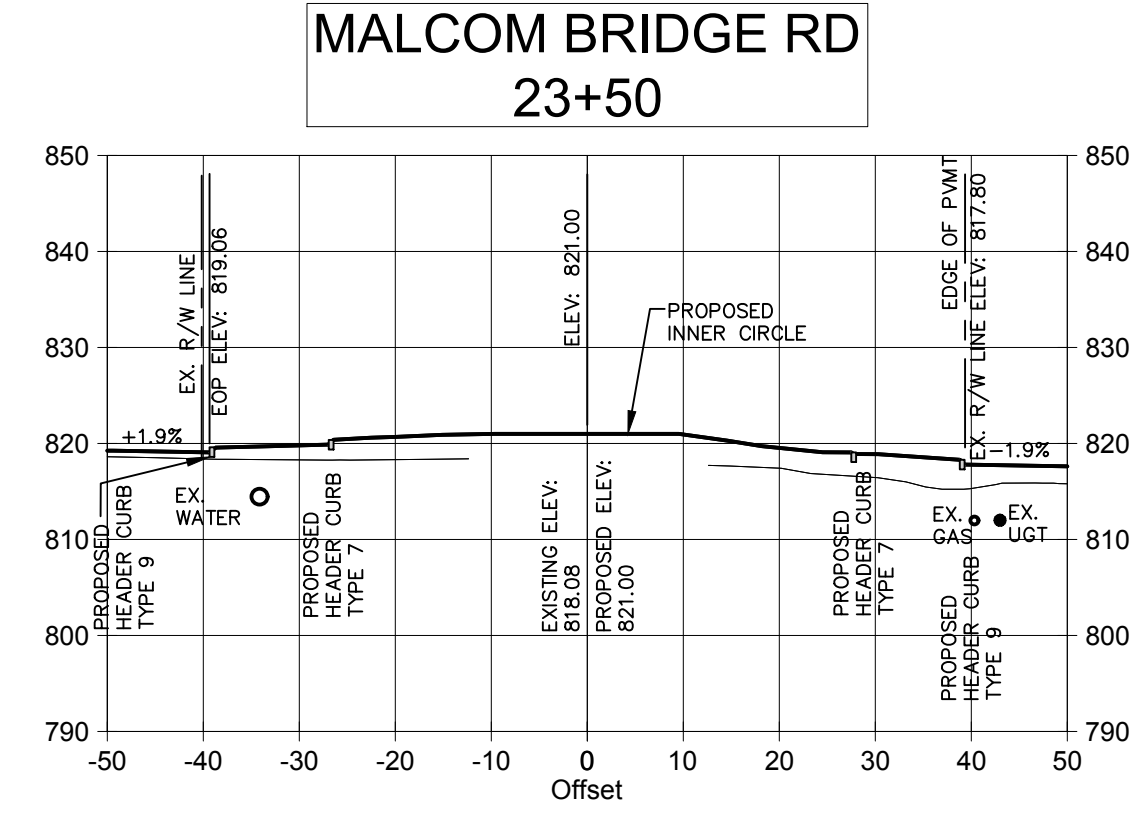
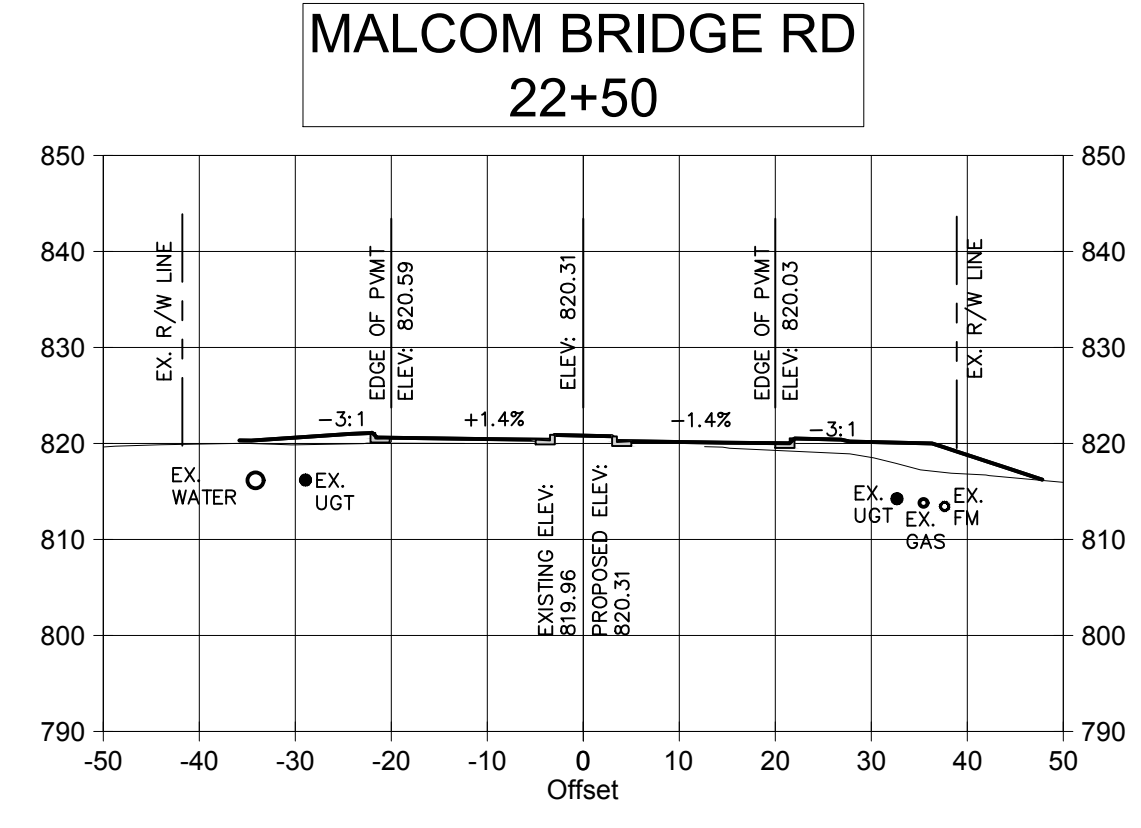
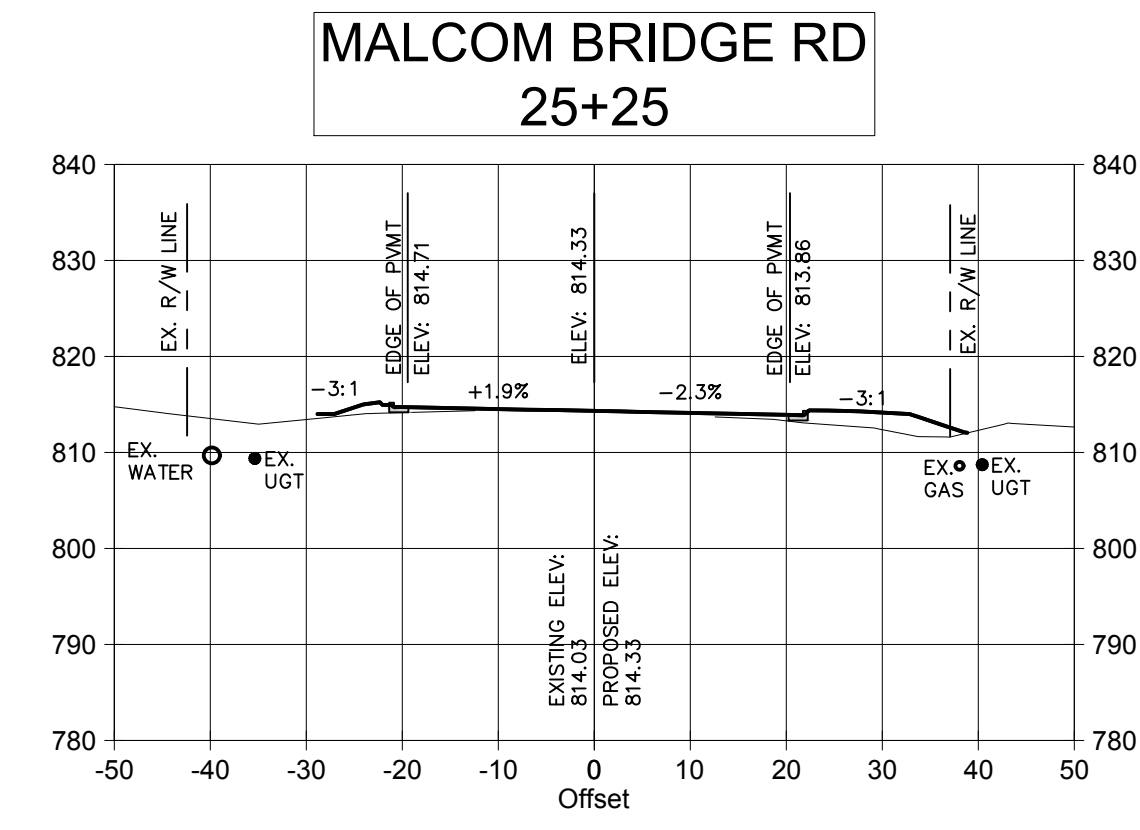
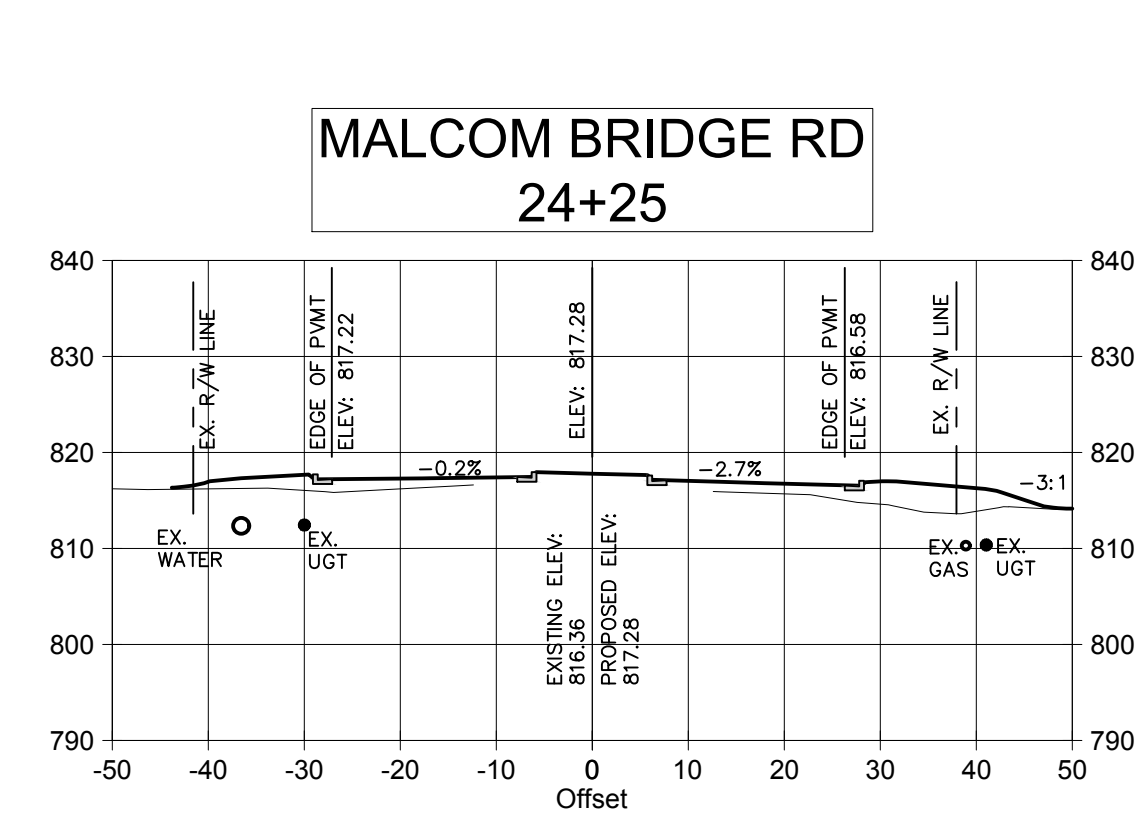
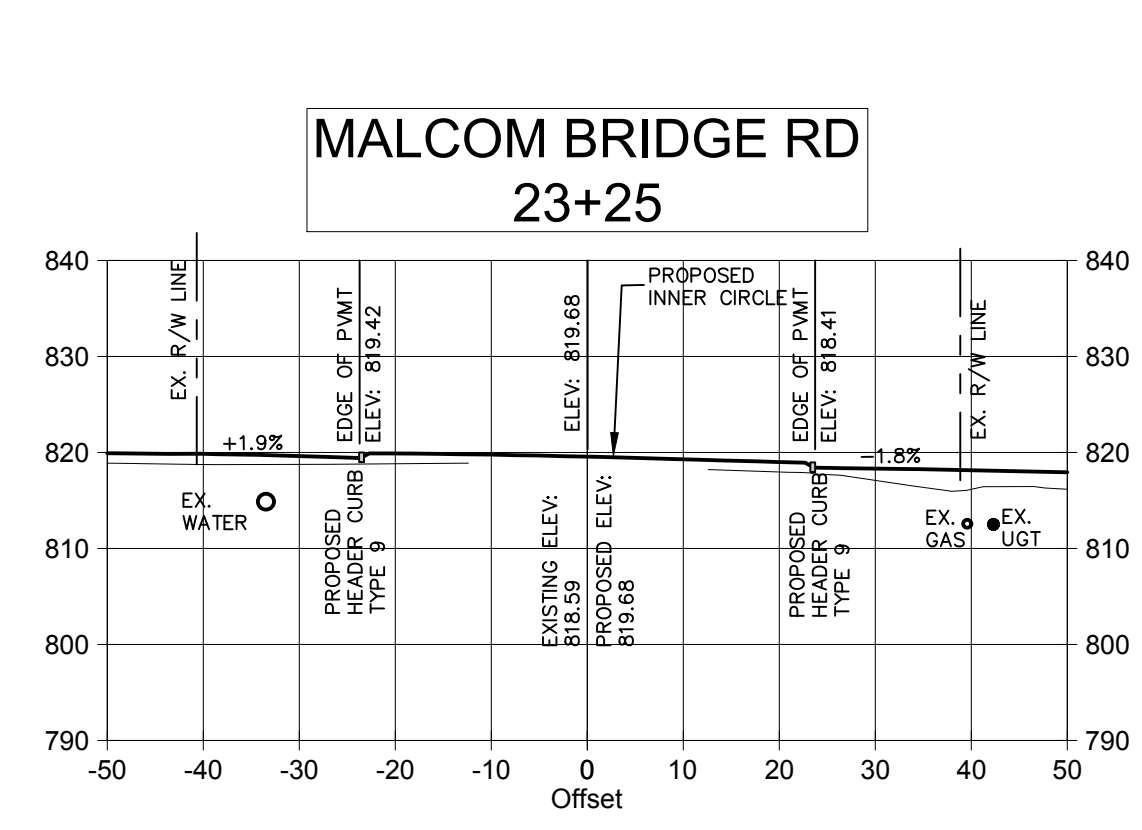
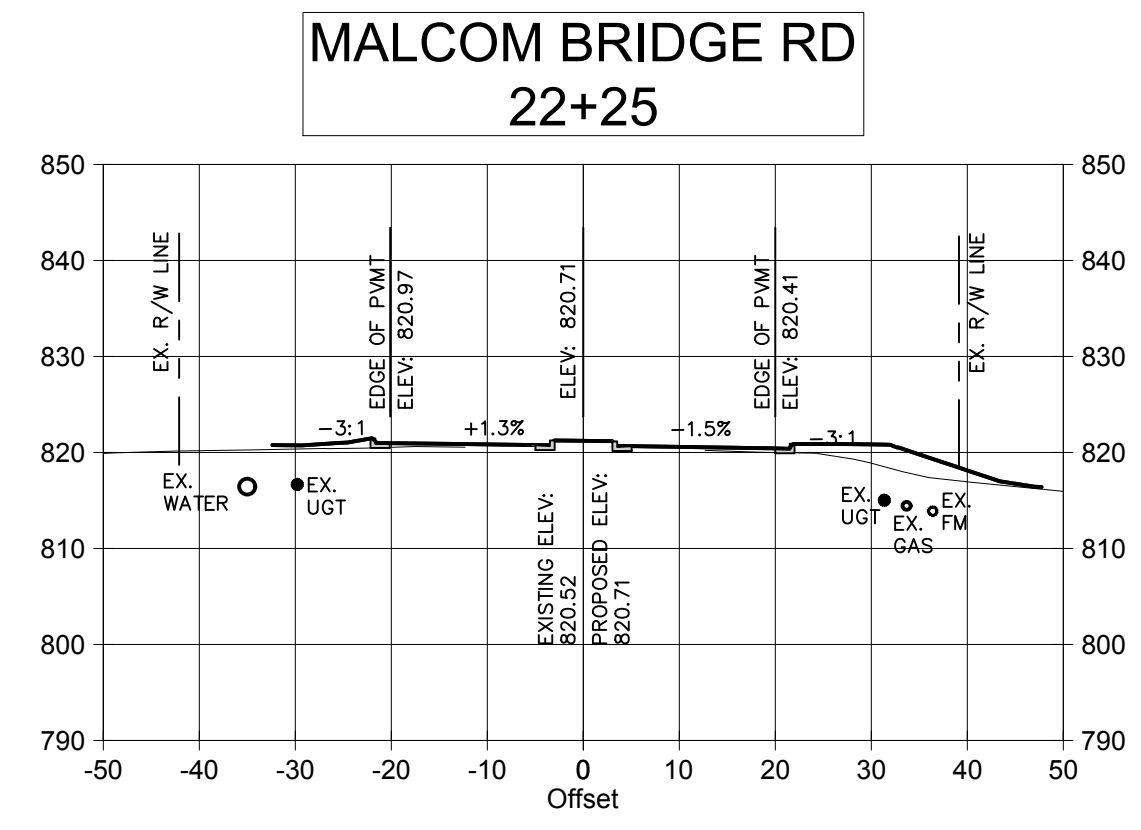
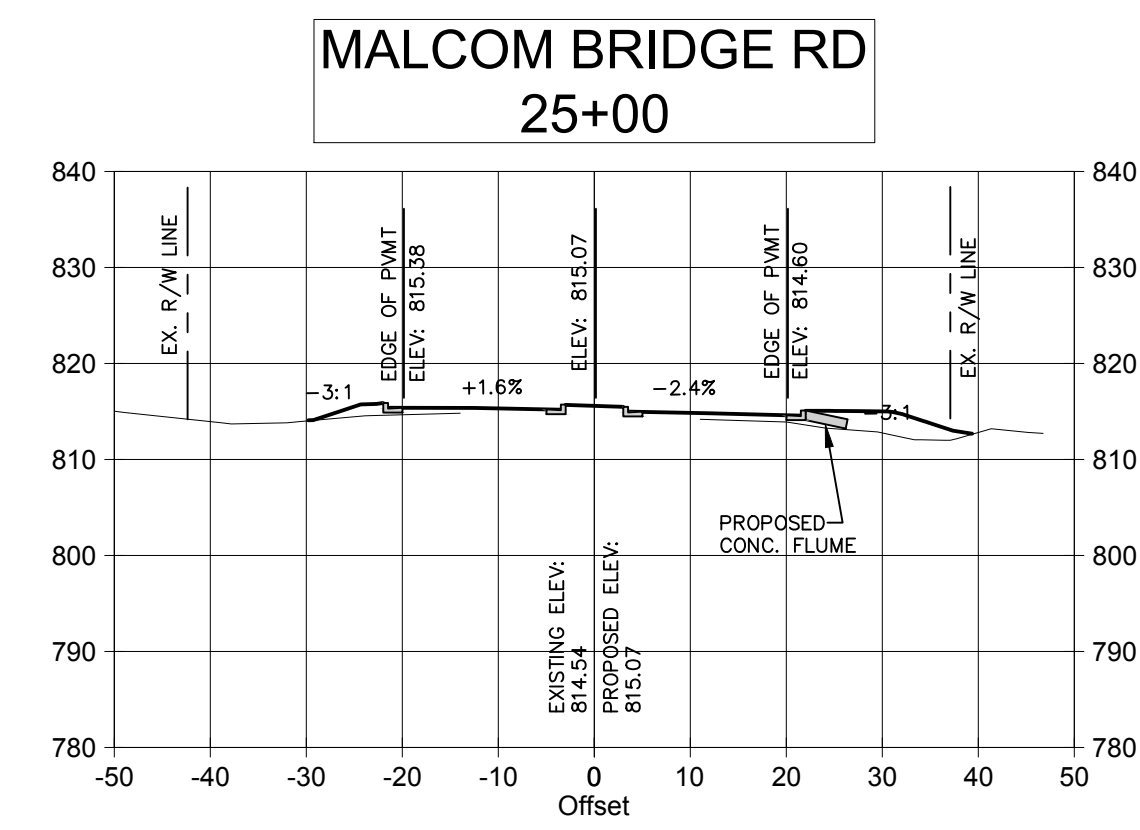
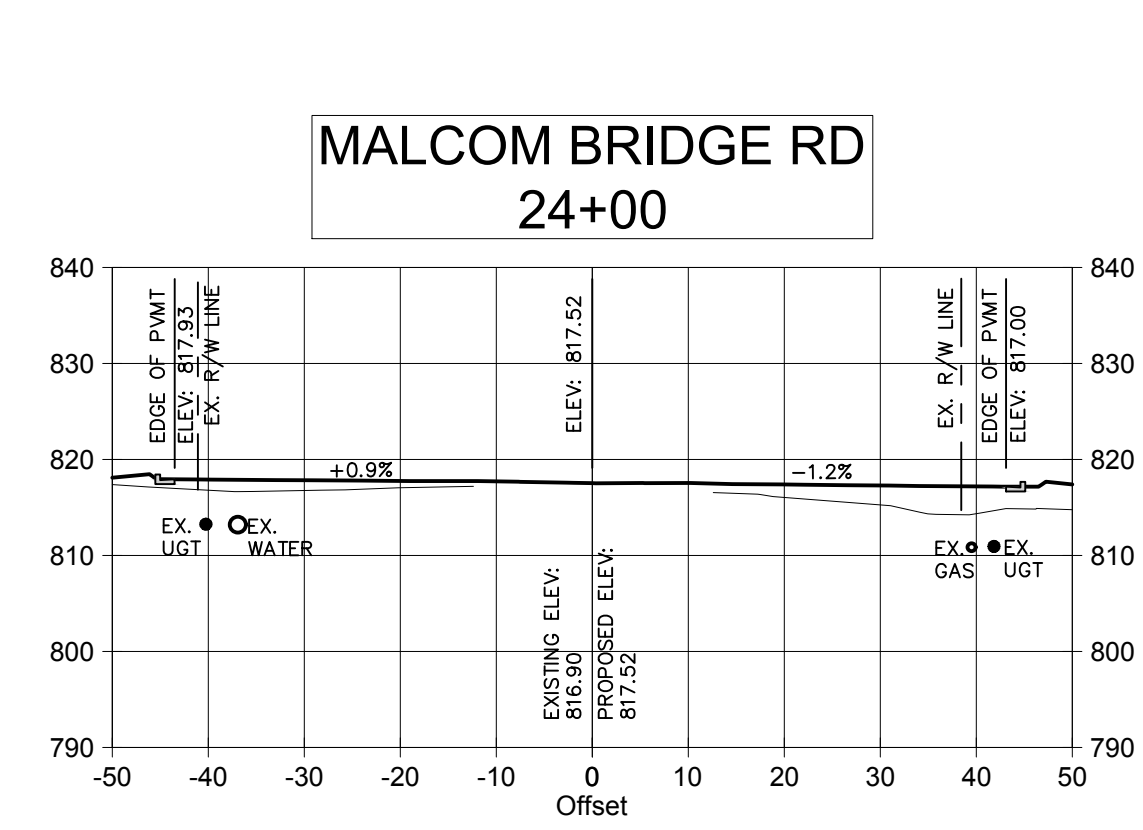
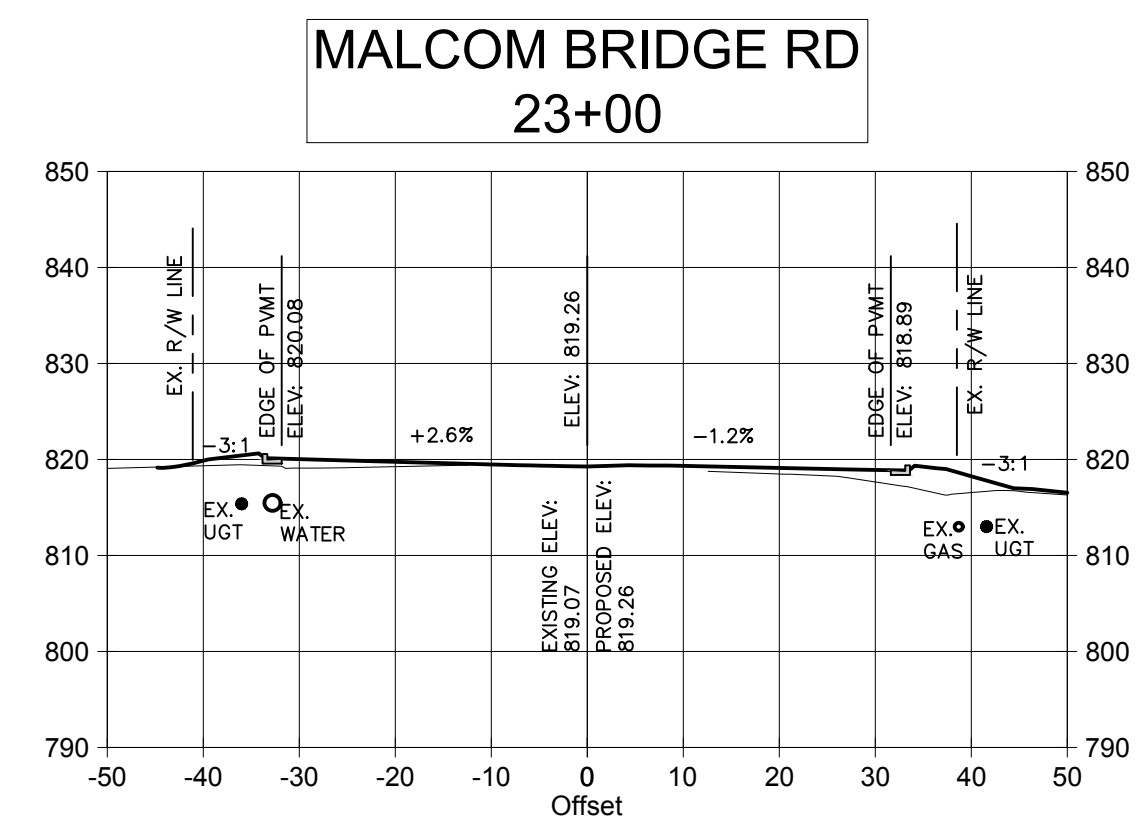
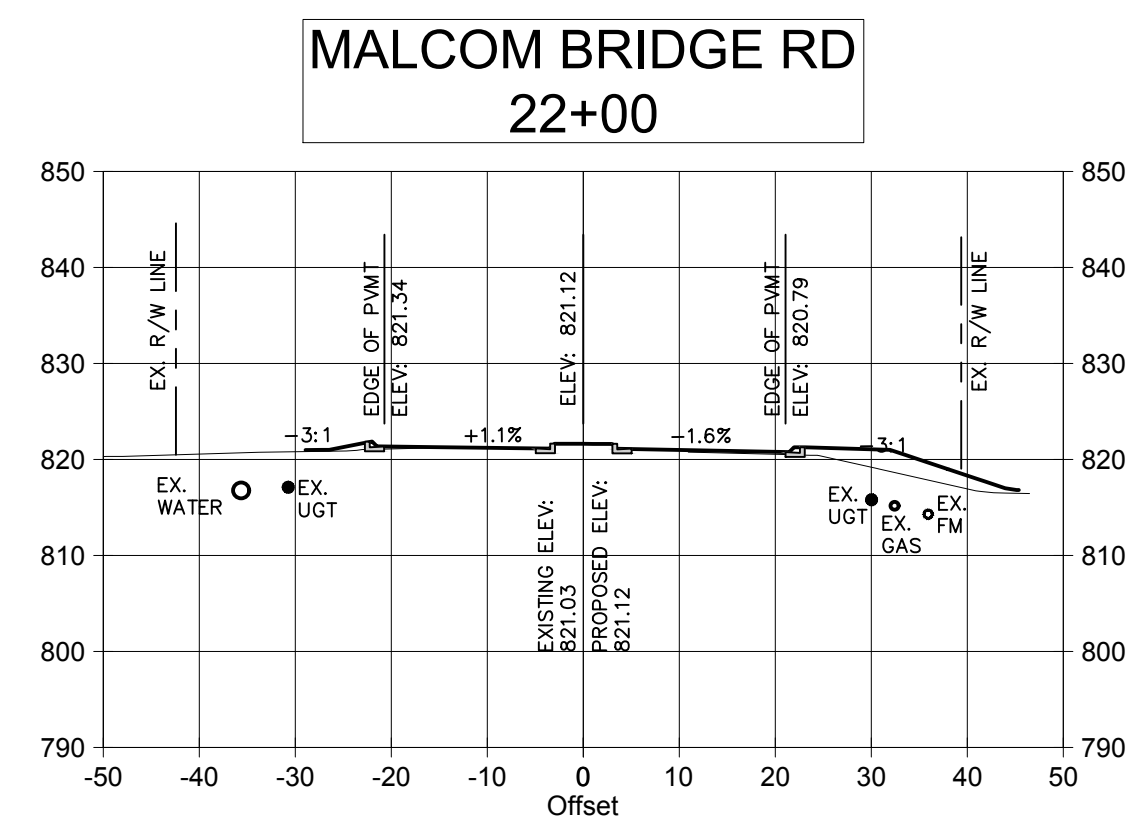
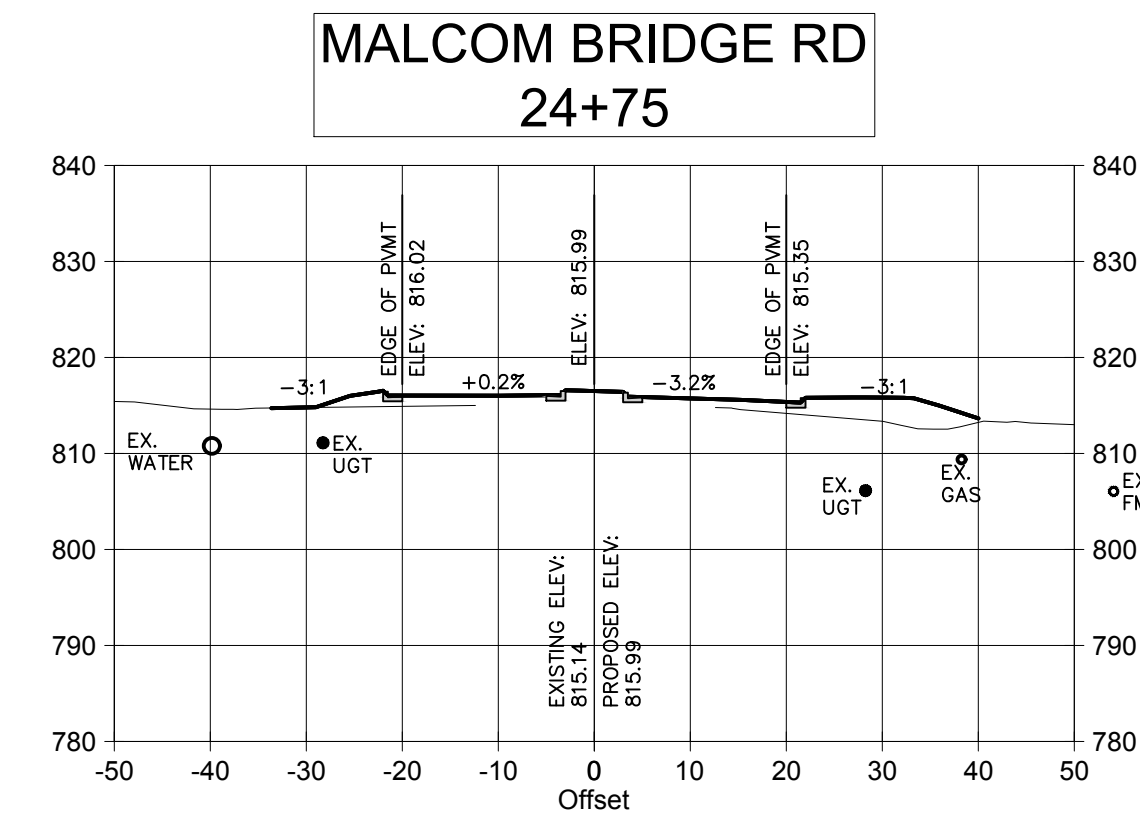
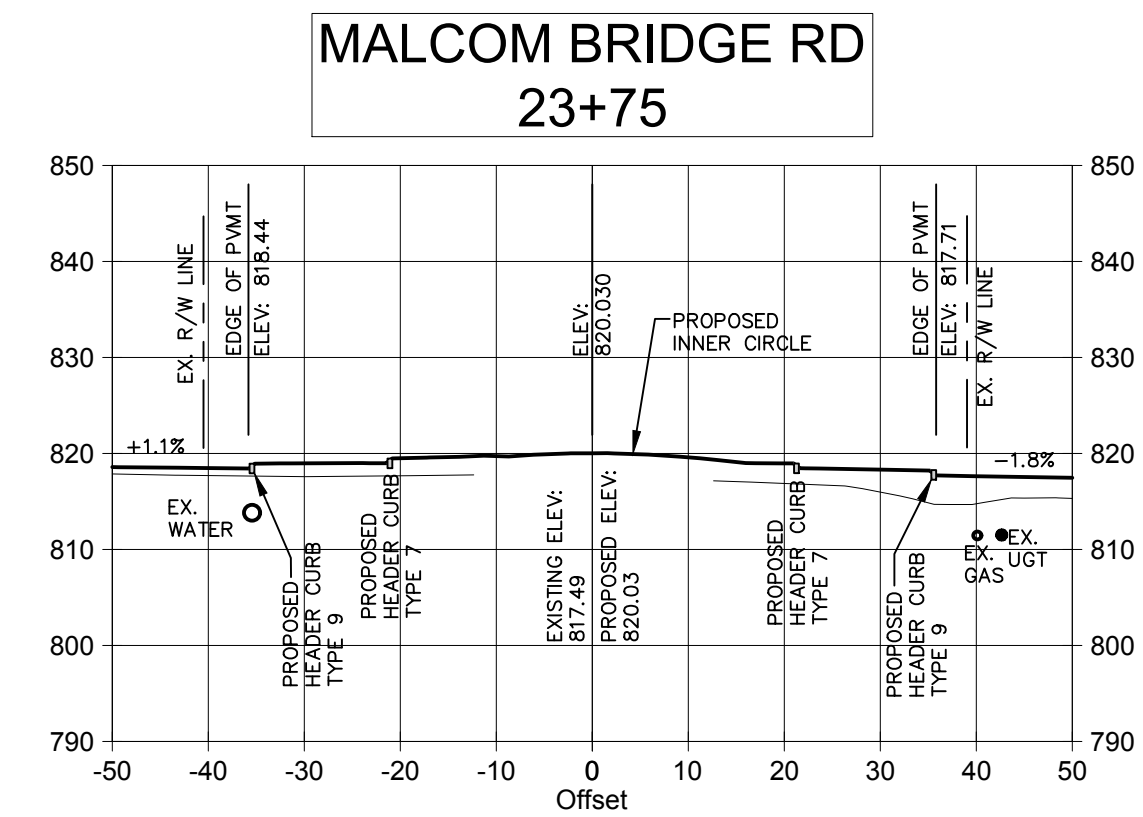
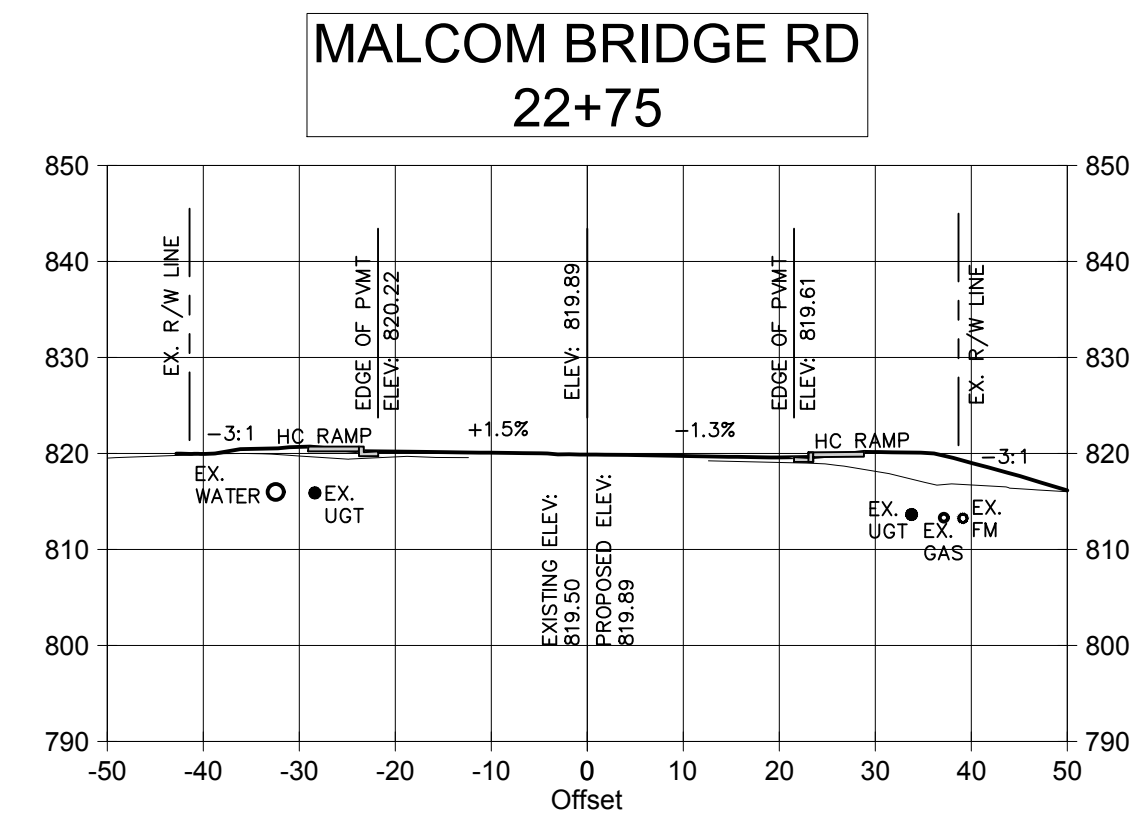
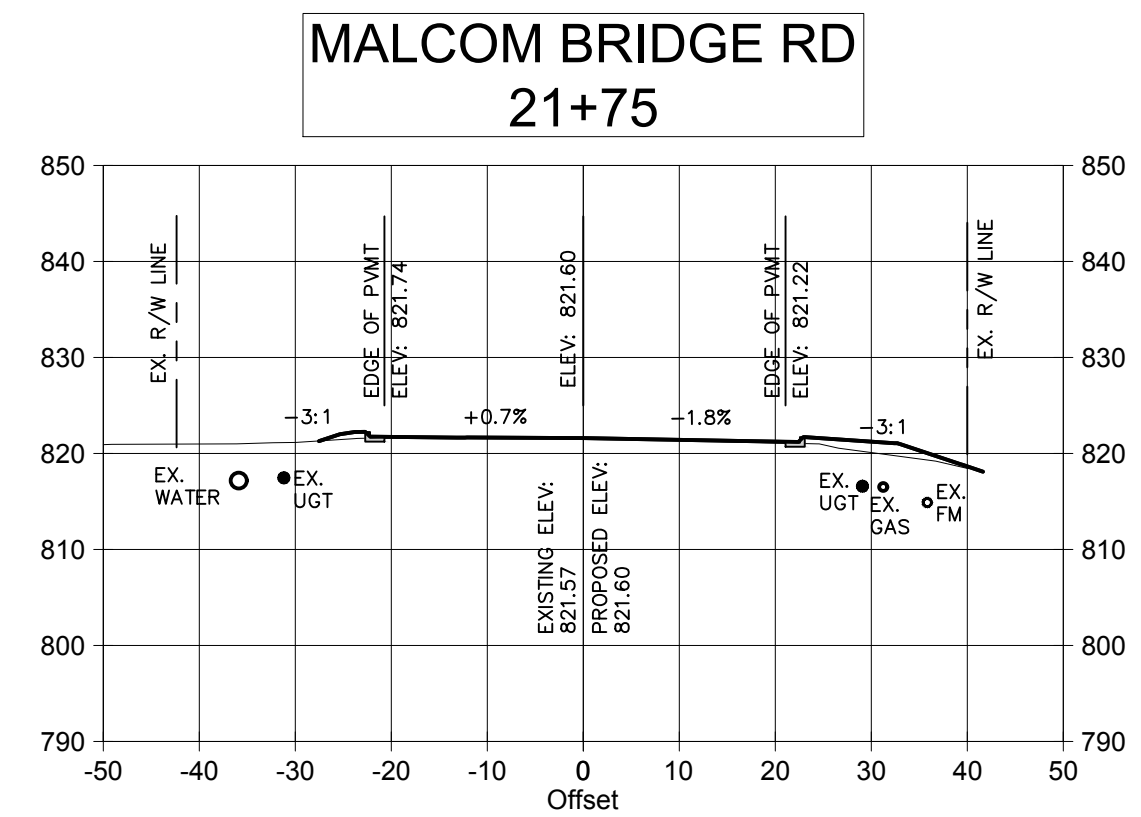
SHEET TITLE:
MALCOM BRIDGE RD. C.S.

SHEET NUMBER:
C-5.11

PROJECT NUMBER:
18001OCG

DATE:
04/01/19





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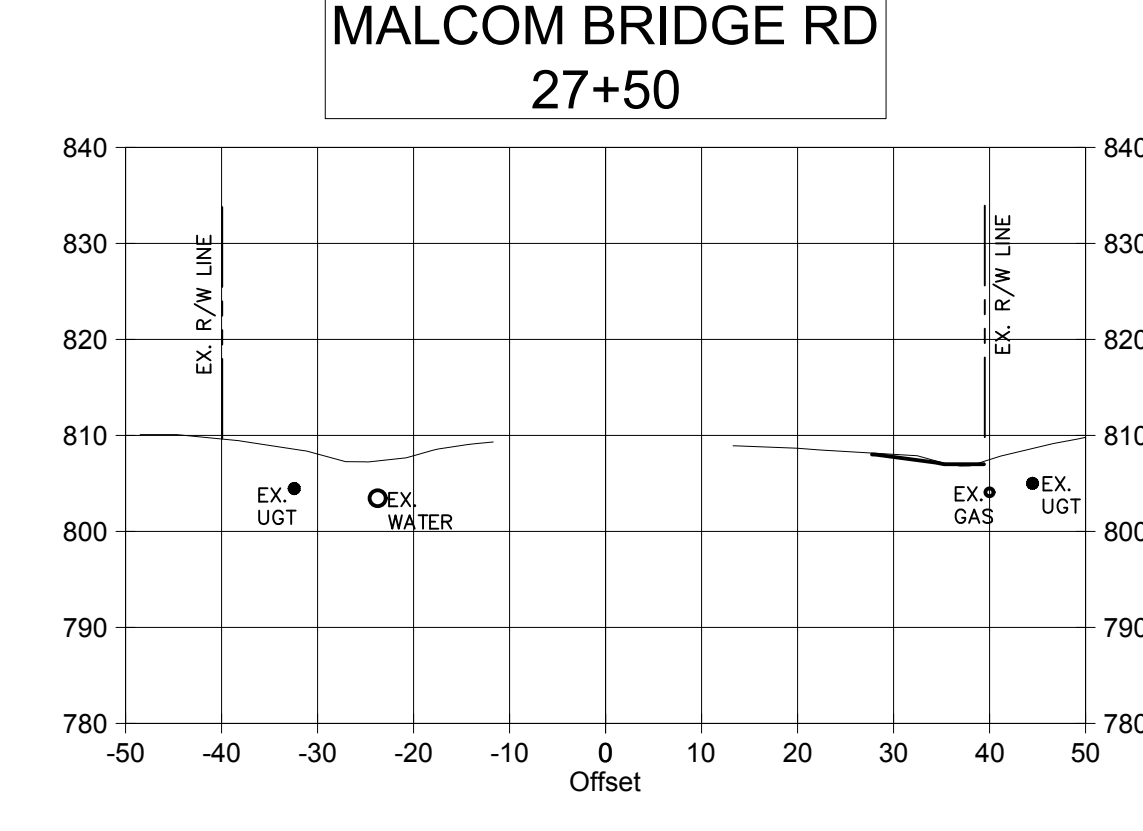
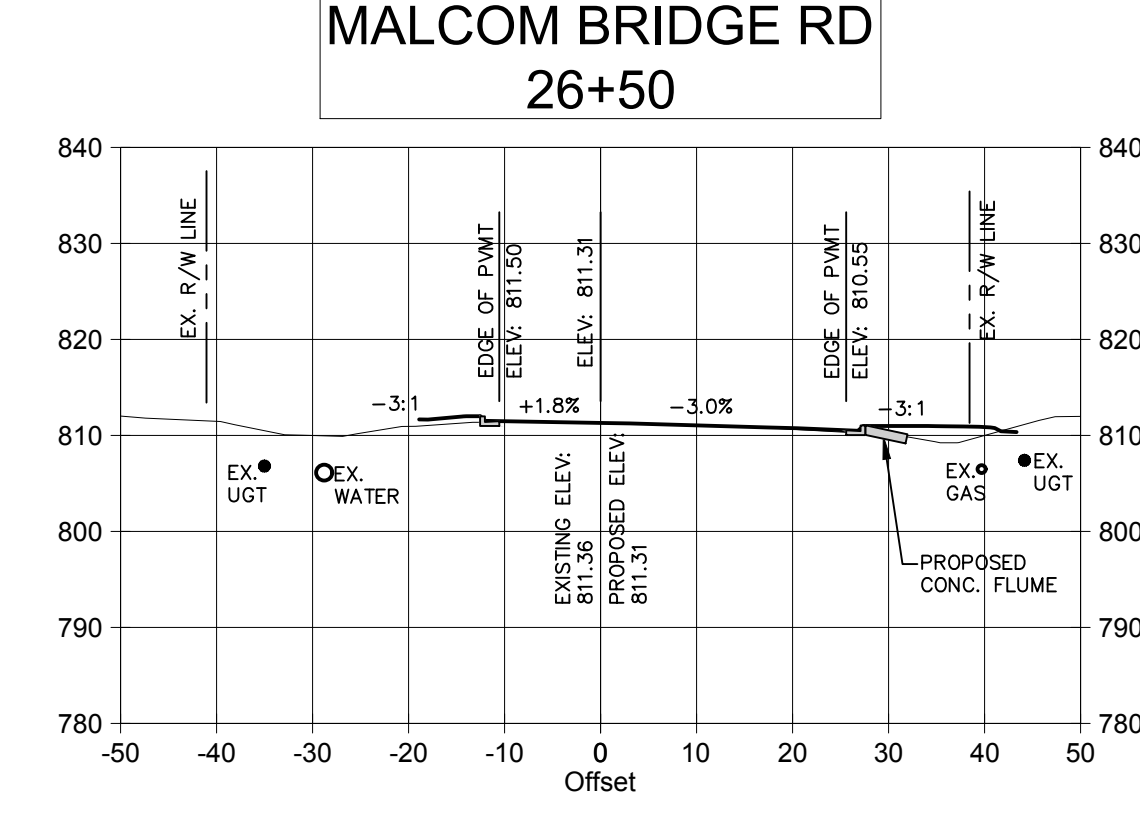
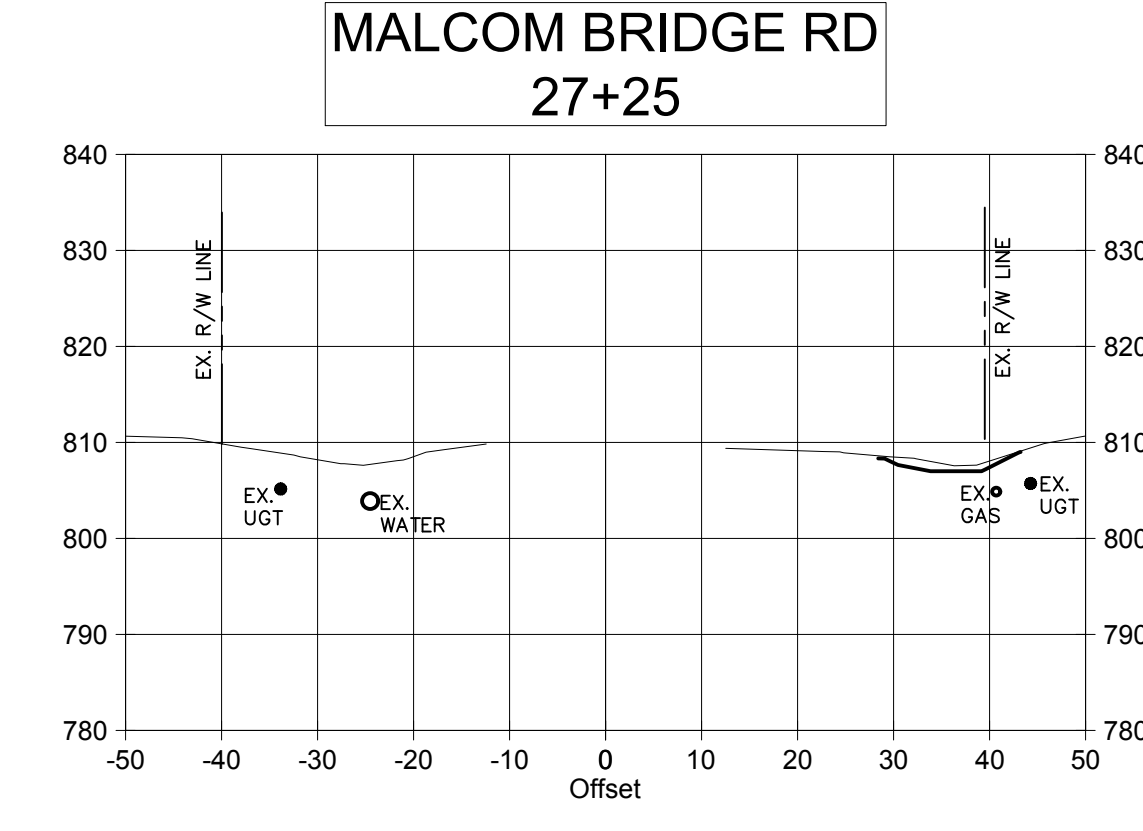
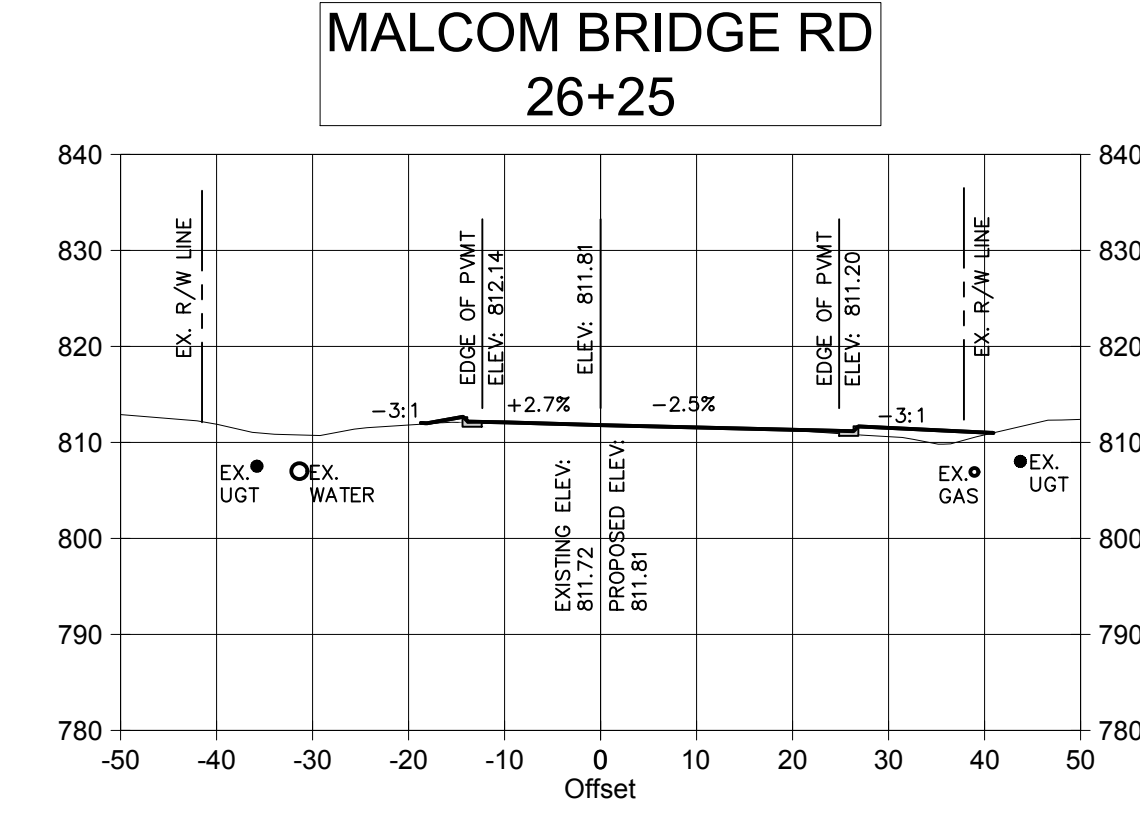
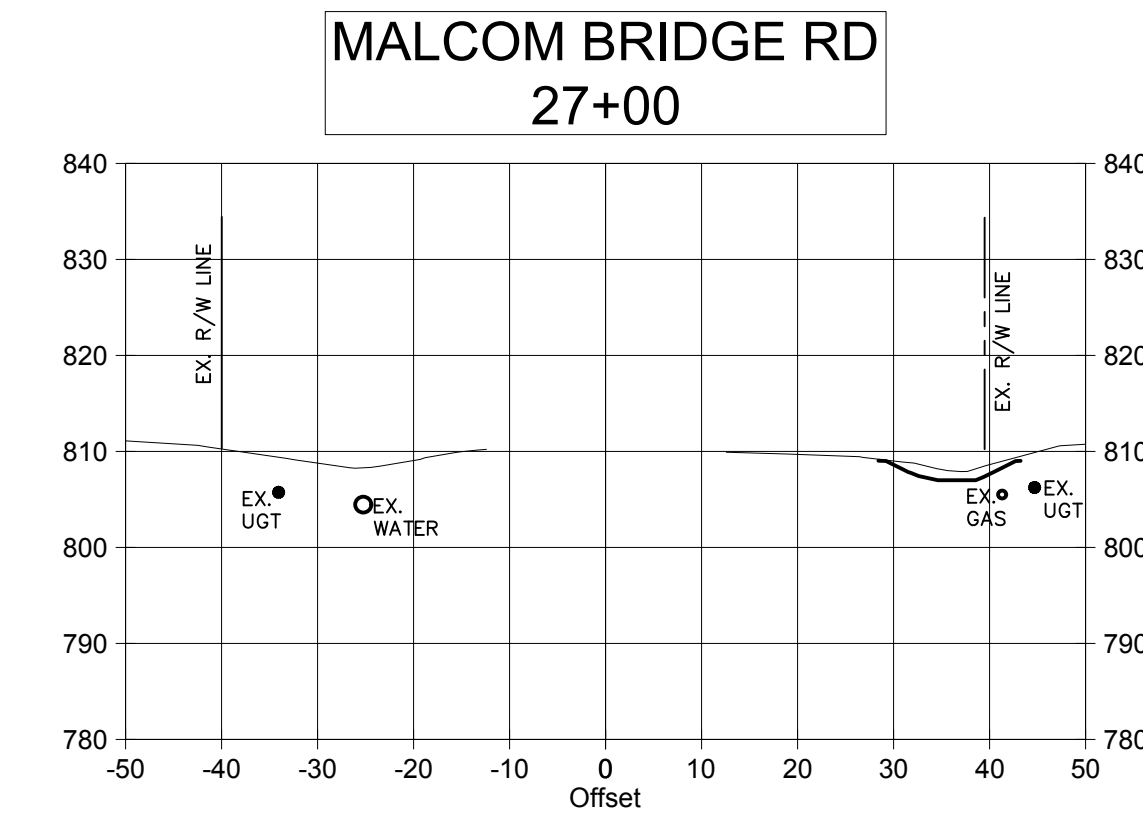
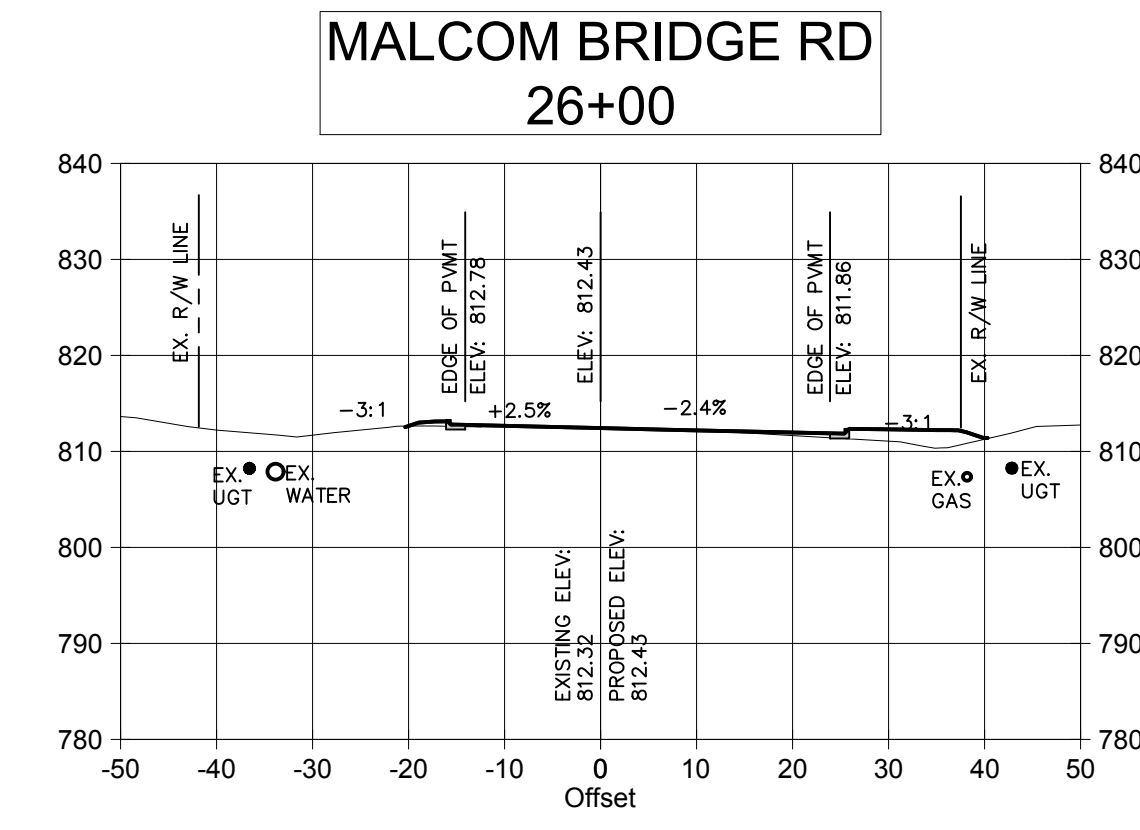
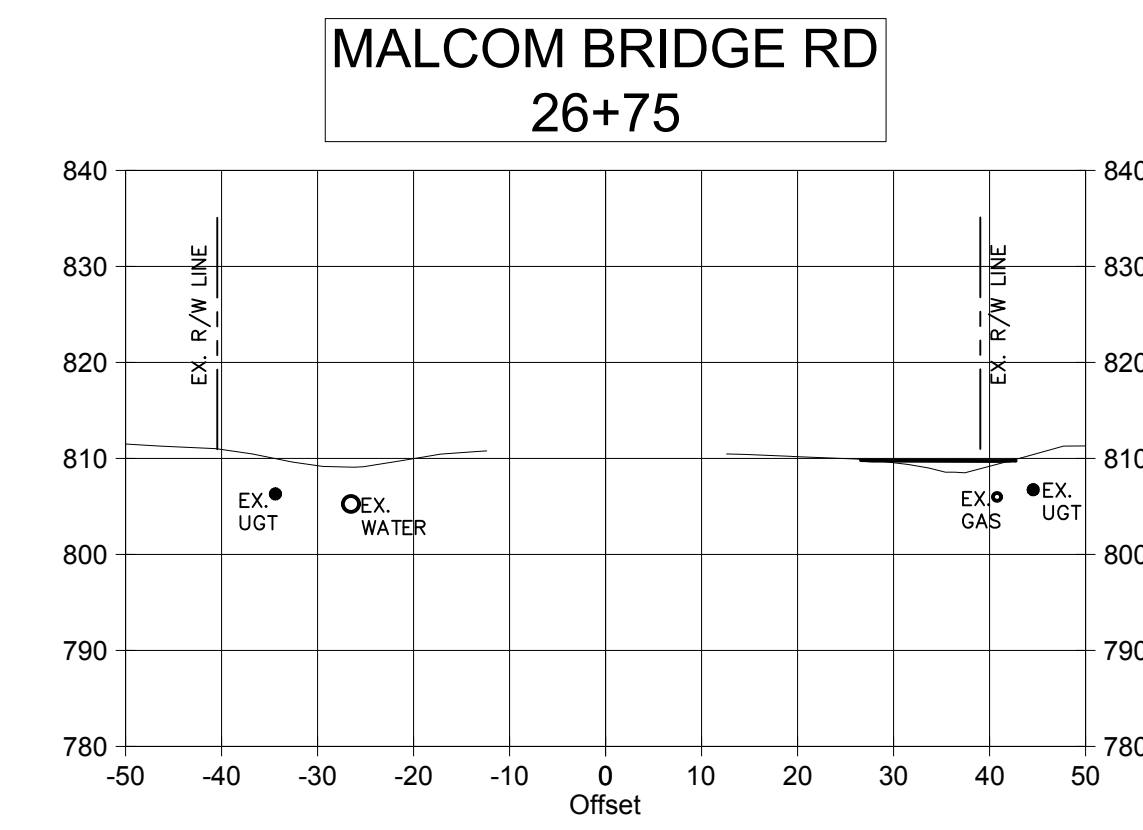
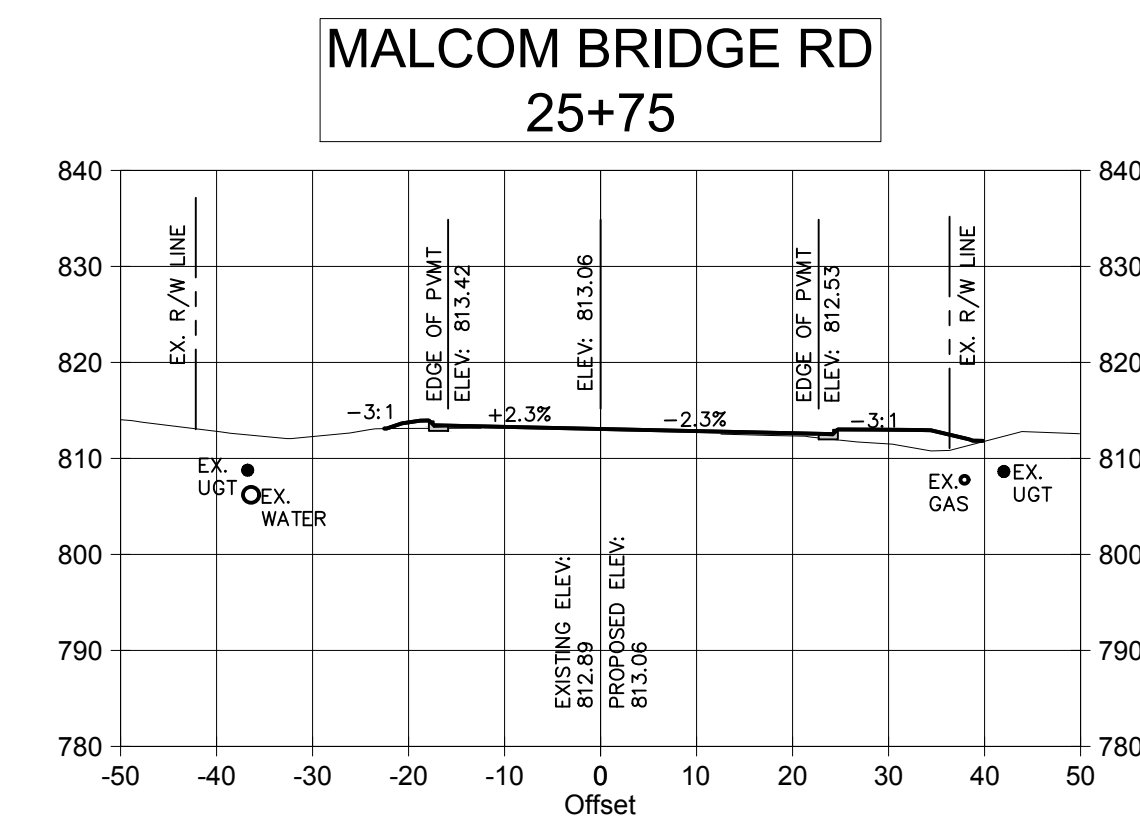
PROJECT NAME:
**ROUNDABOUT
PLANS**

SHEET TITLE:
**MALCOM
BRIDGE RD. C.S.**

SHEET NUMBER:
C-5.12

PROJECT NUMBER:
18001OCG

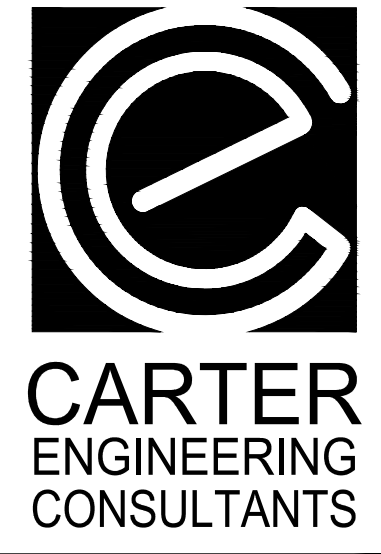
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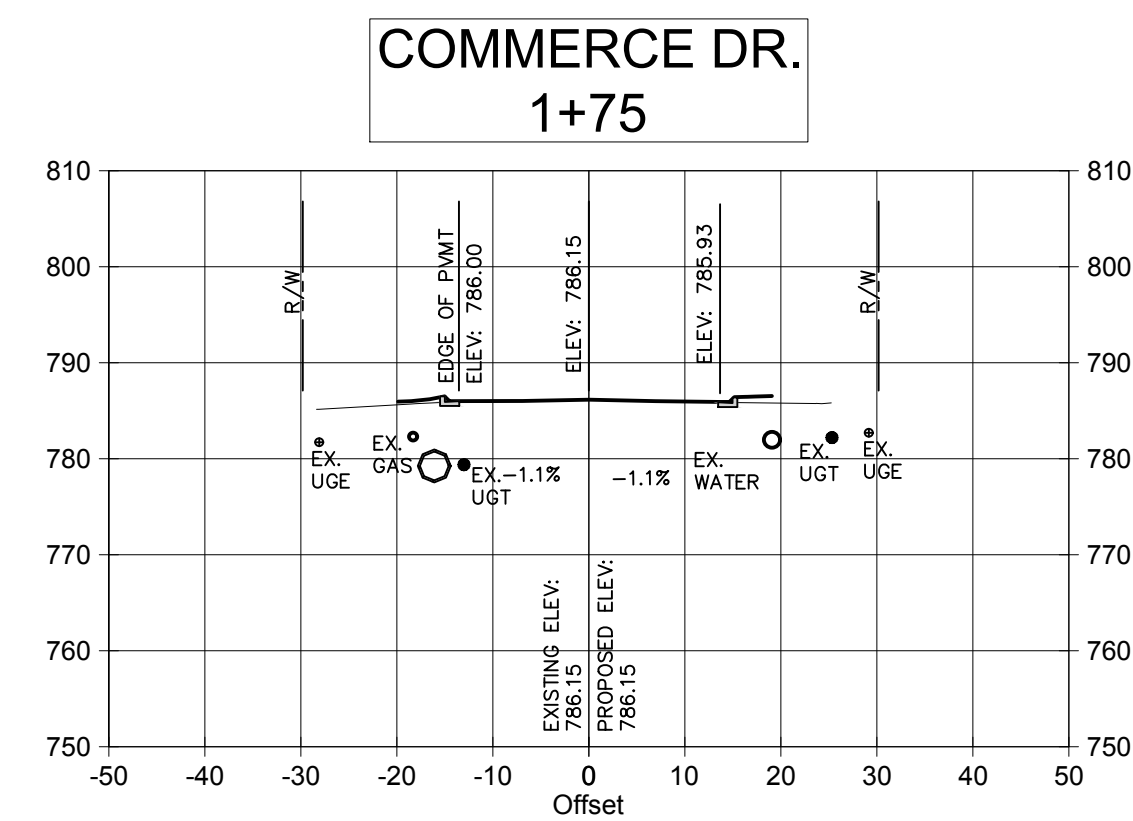
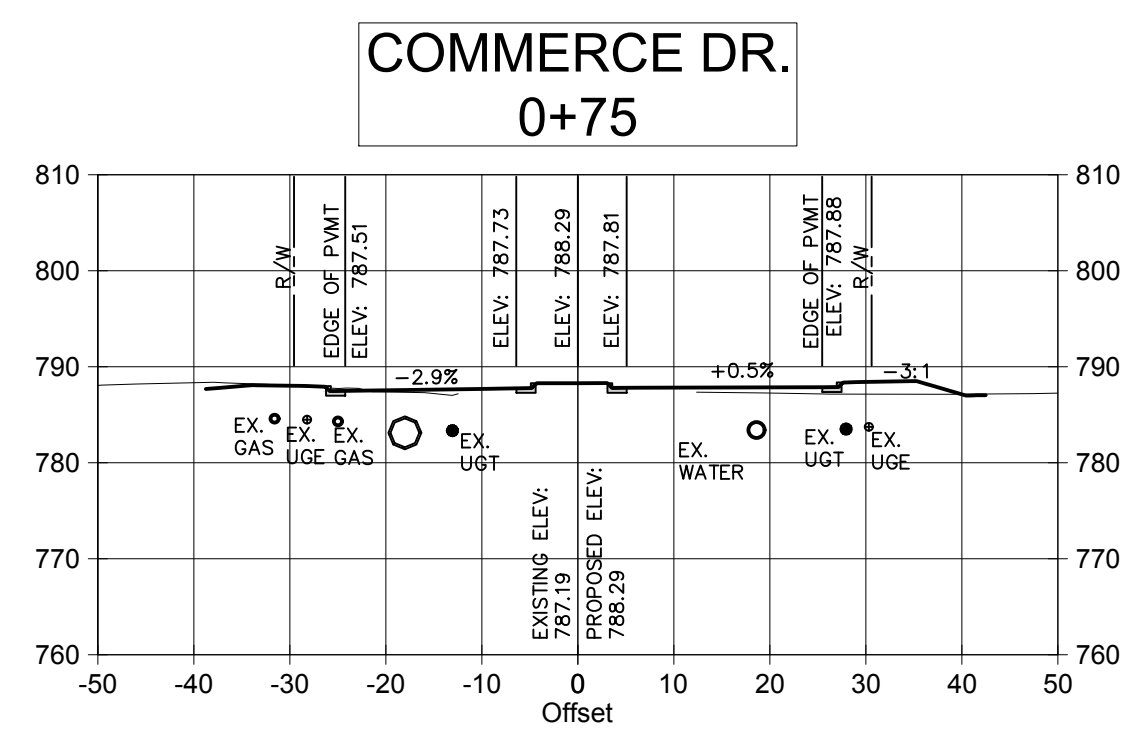
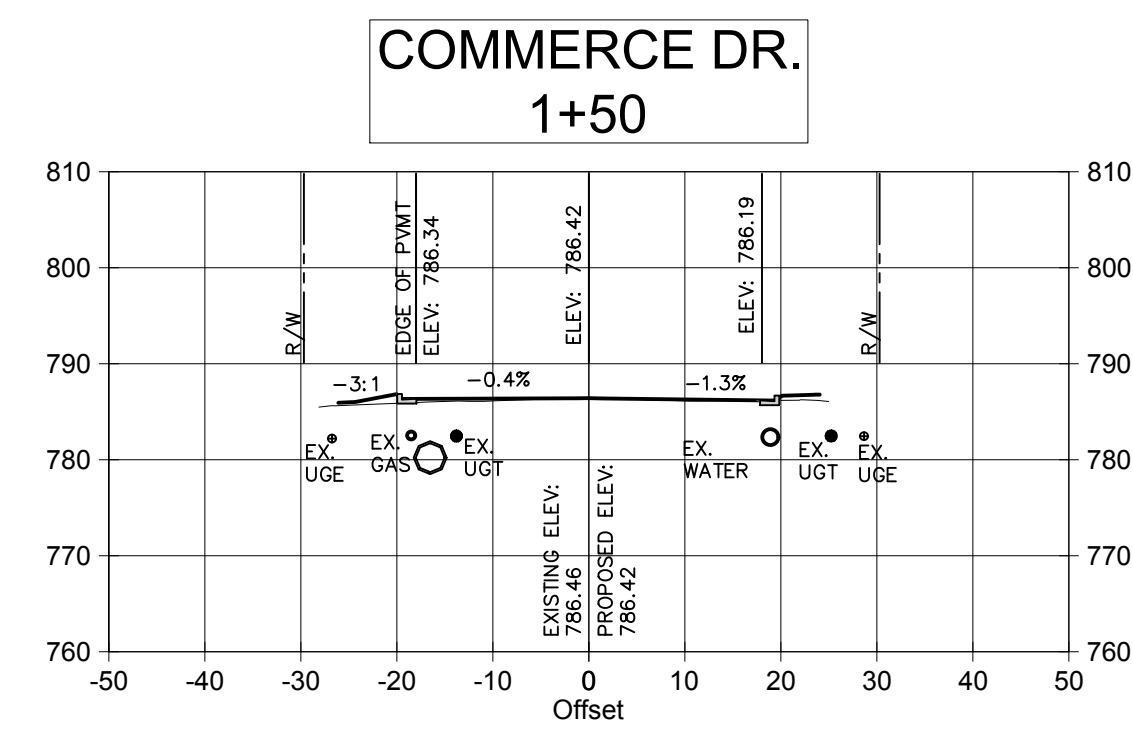
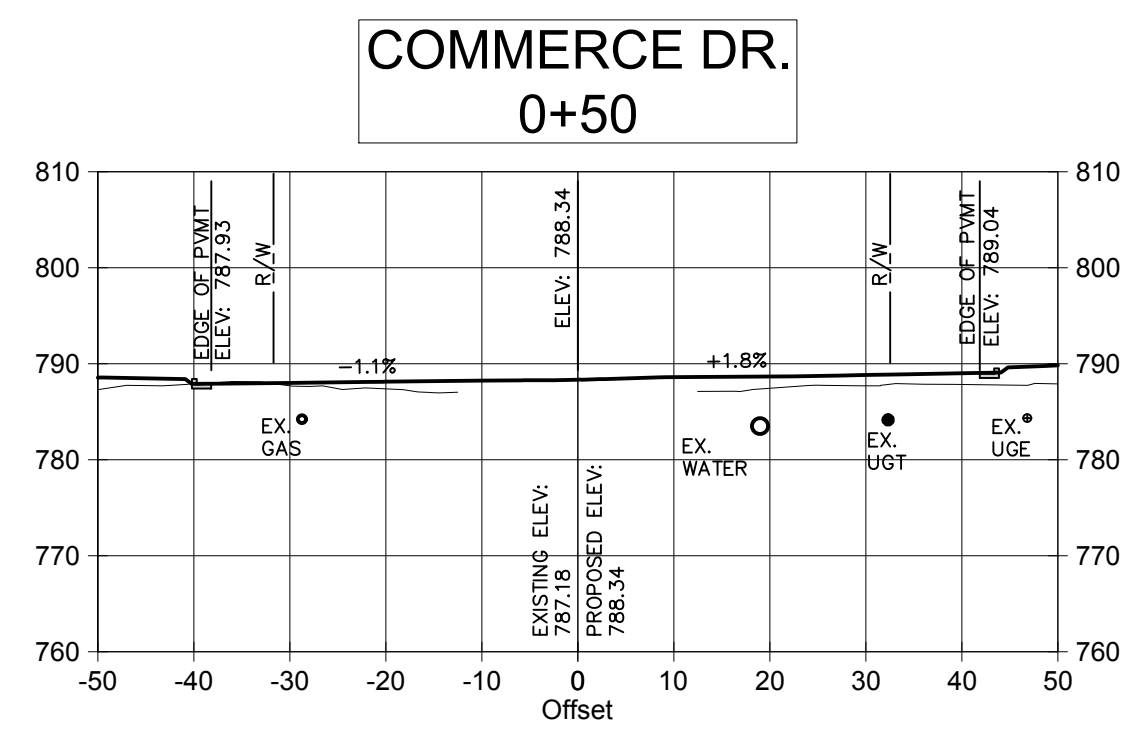
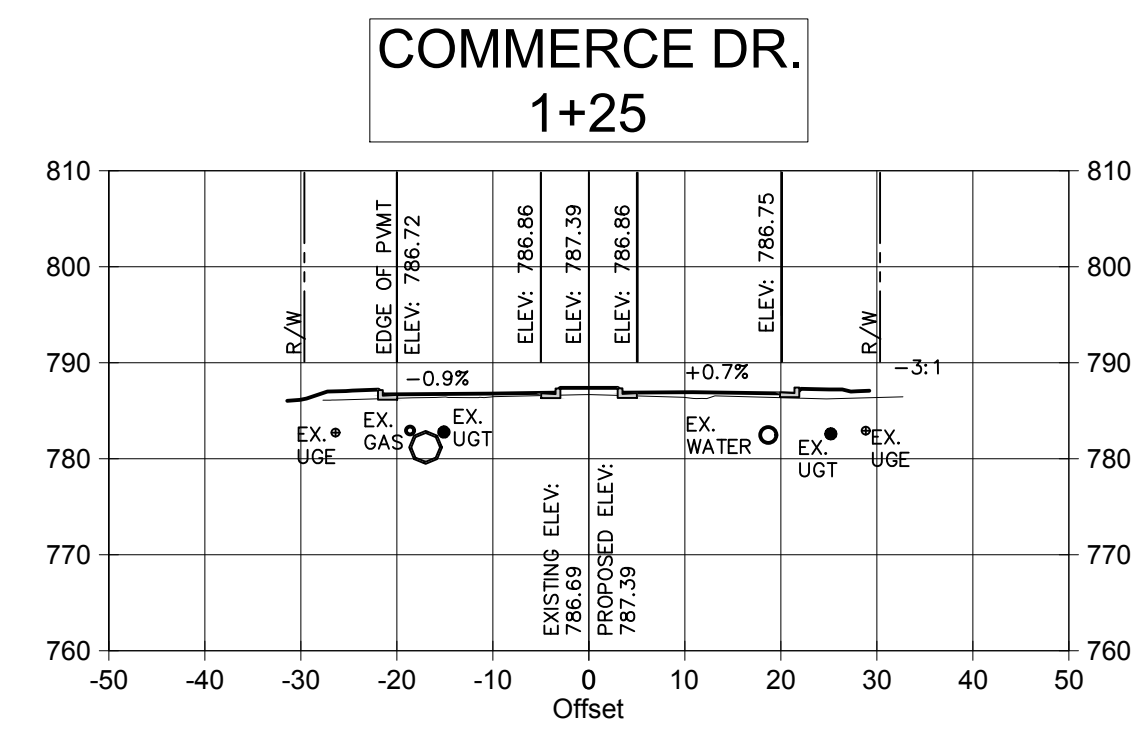
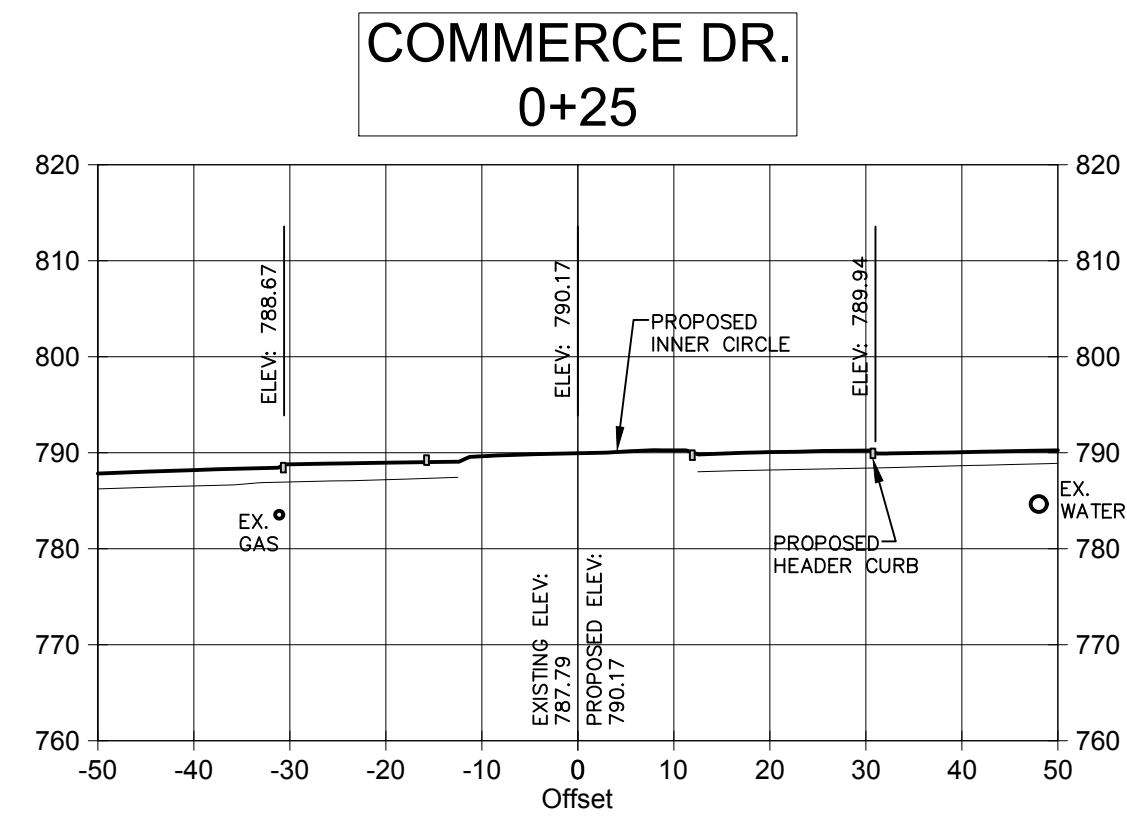
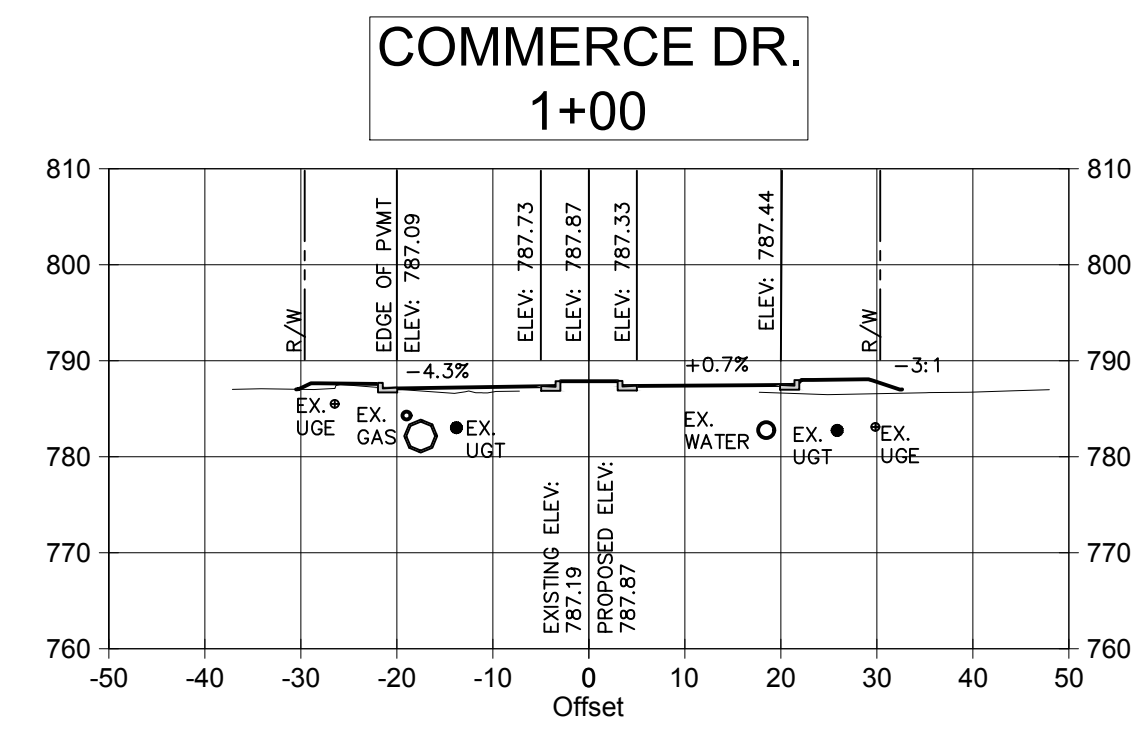
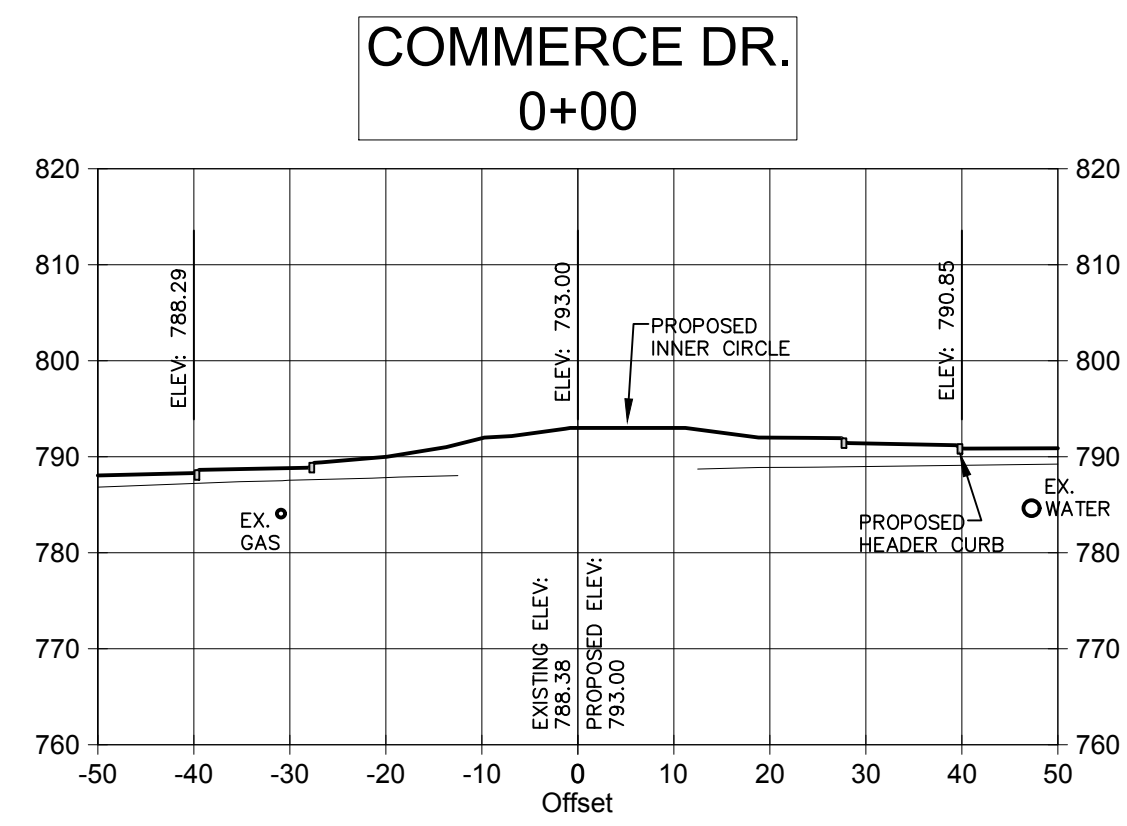
PROJECT NAME:
**ROUNDABOUT
PLANS**

SHEET TITLE:
**MALCOM
BRIDGE RD. C.S.**

SHEET NUMBER:
C-5.13

PROJECT NUMBER:
18001OCG

DATE:
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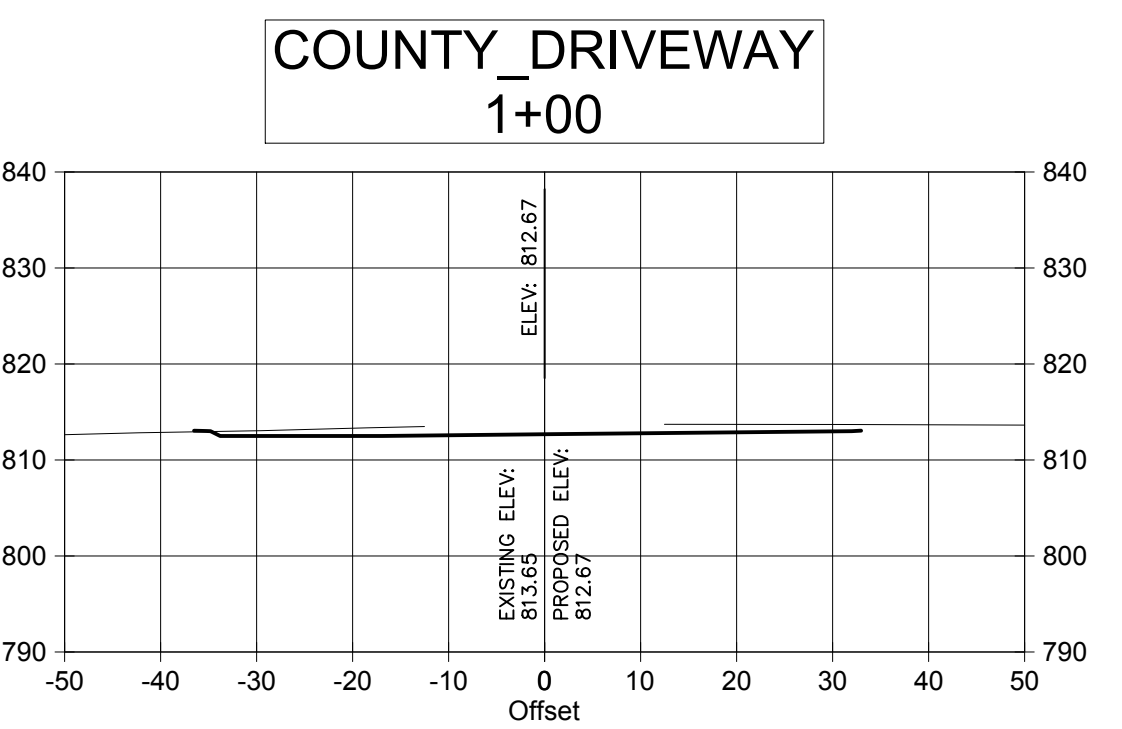
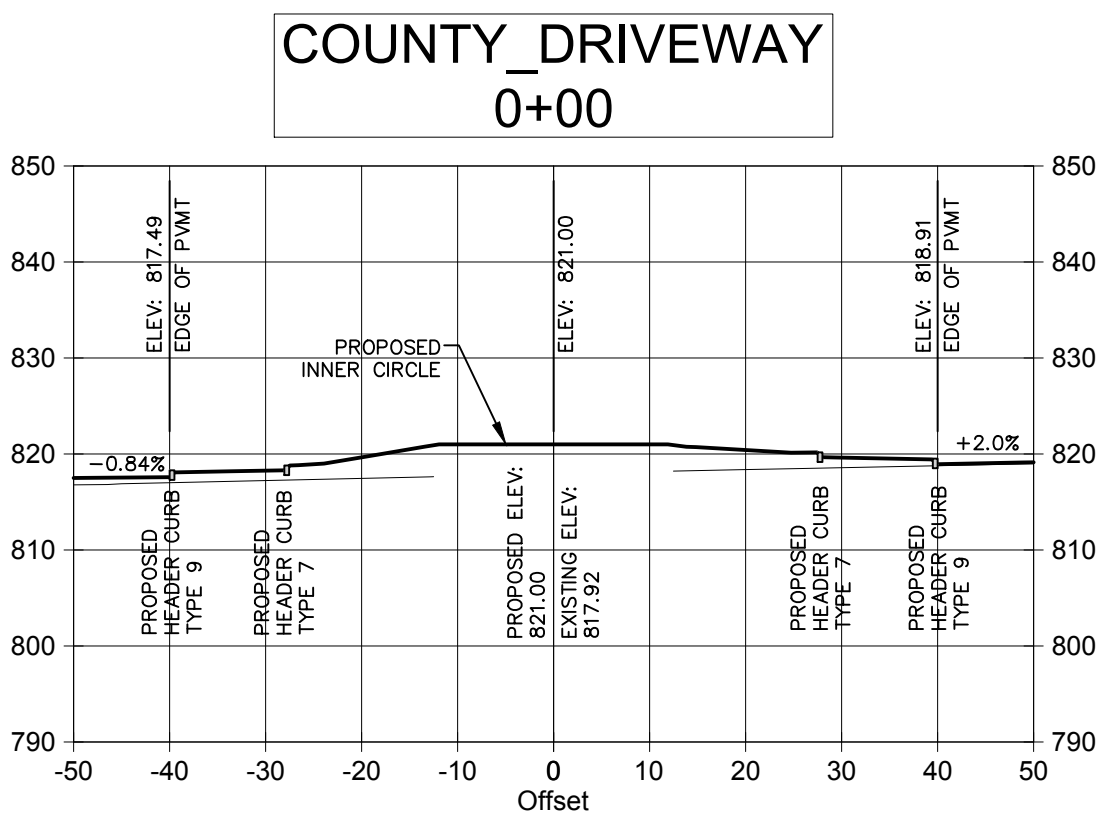
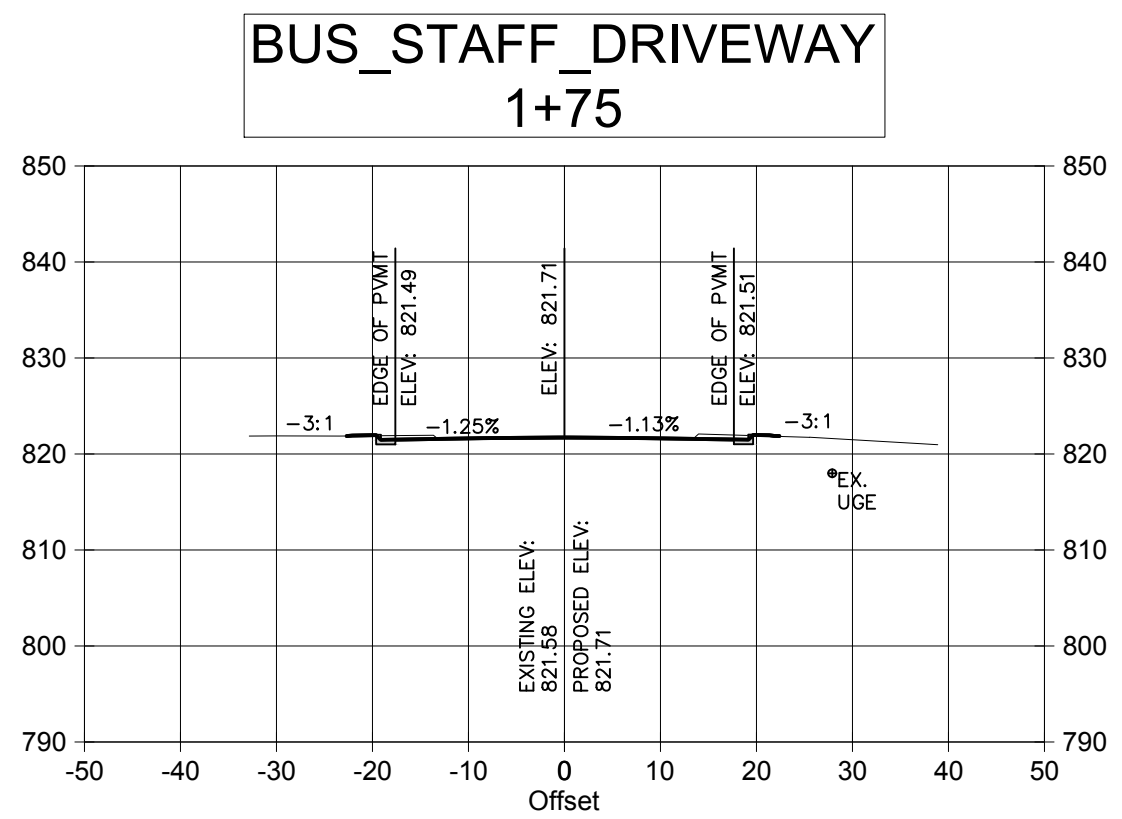
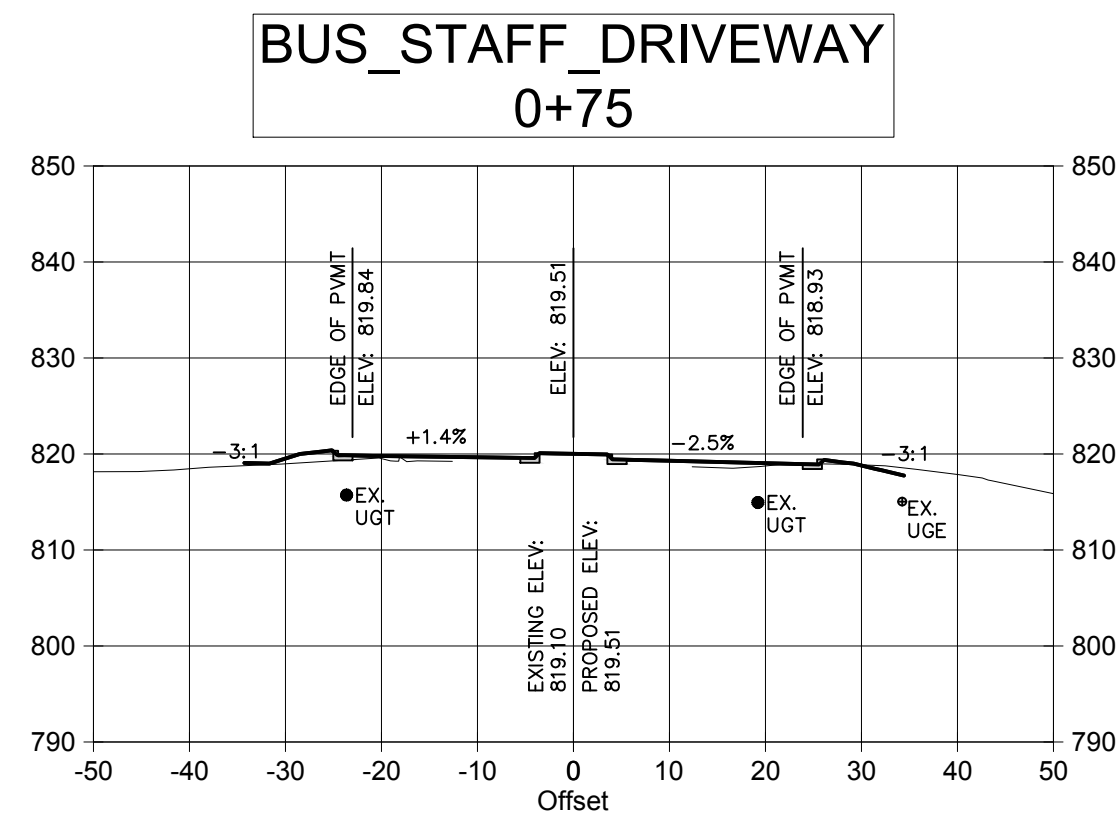
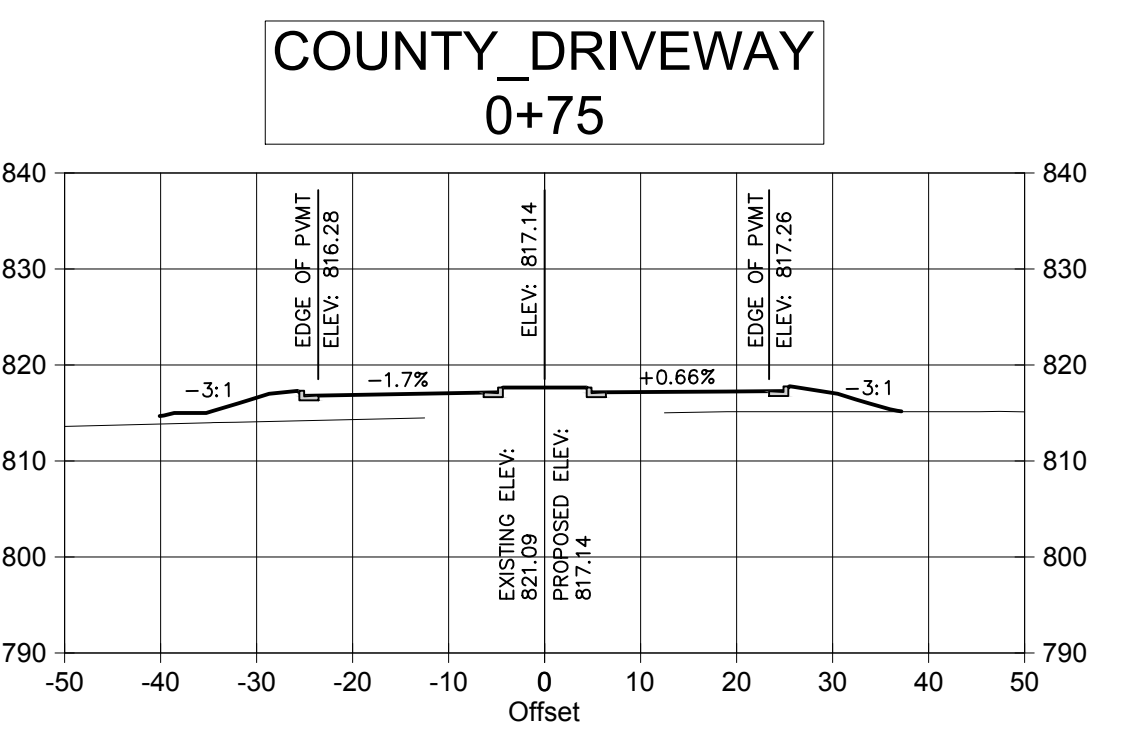
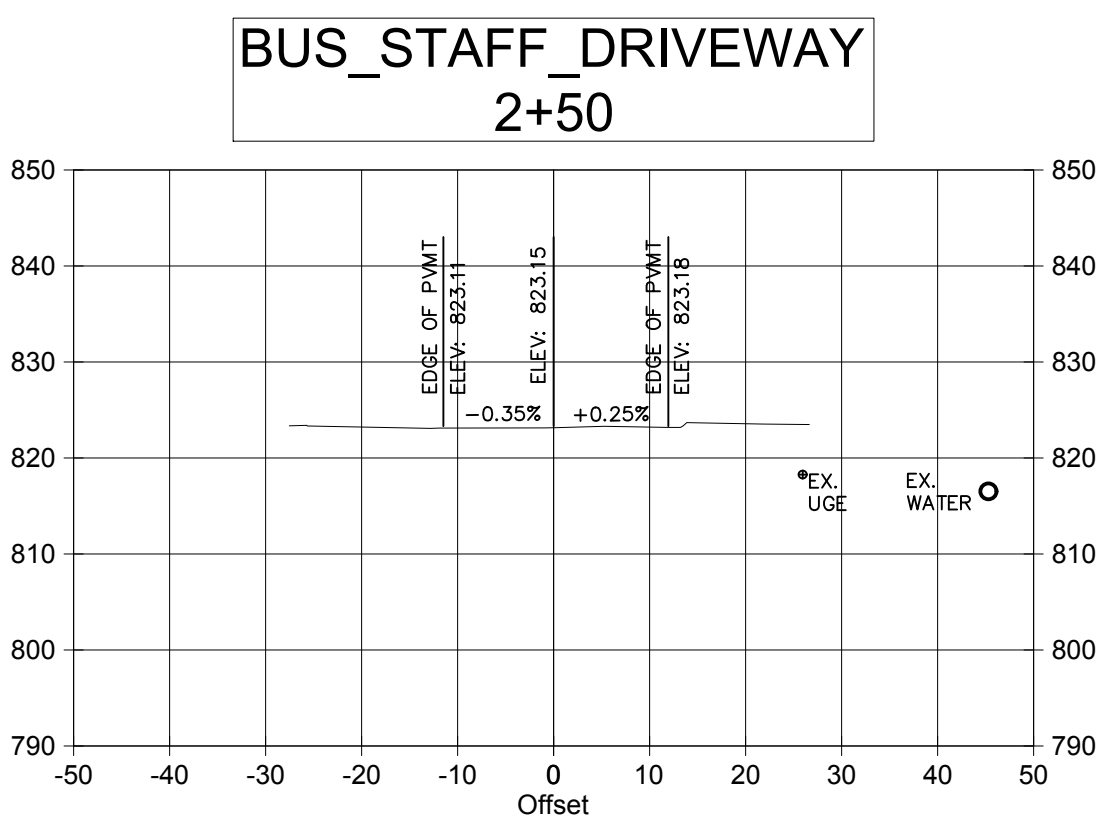
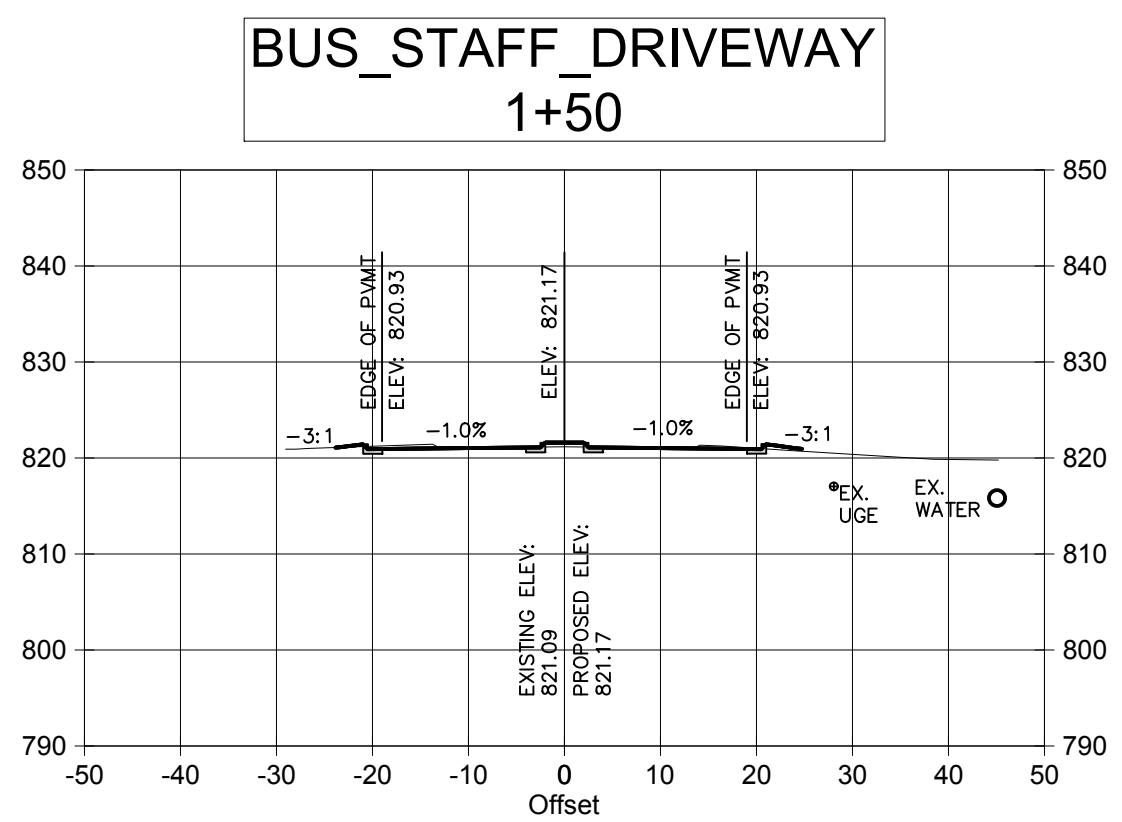
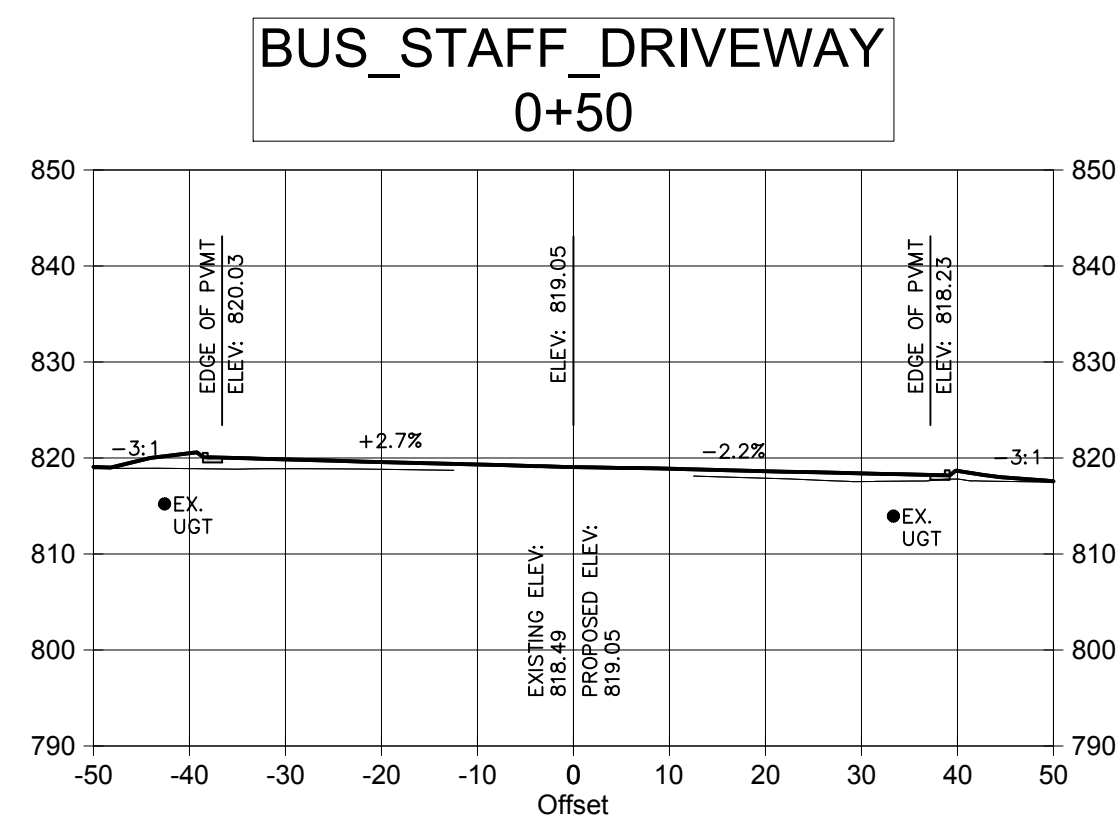
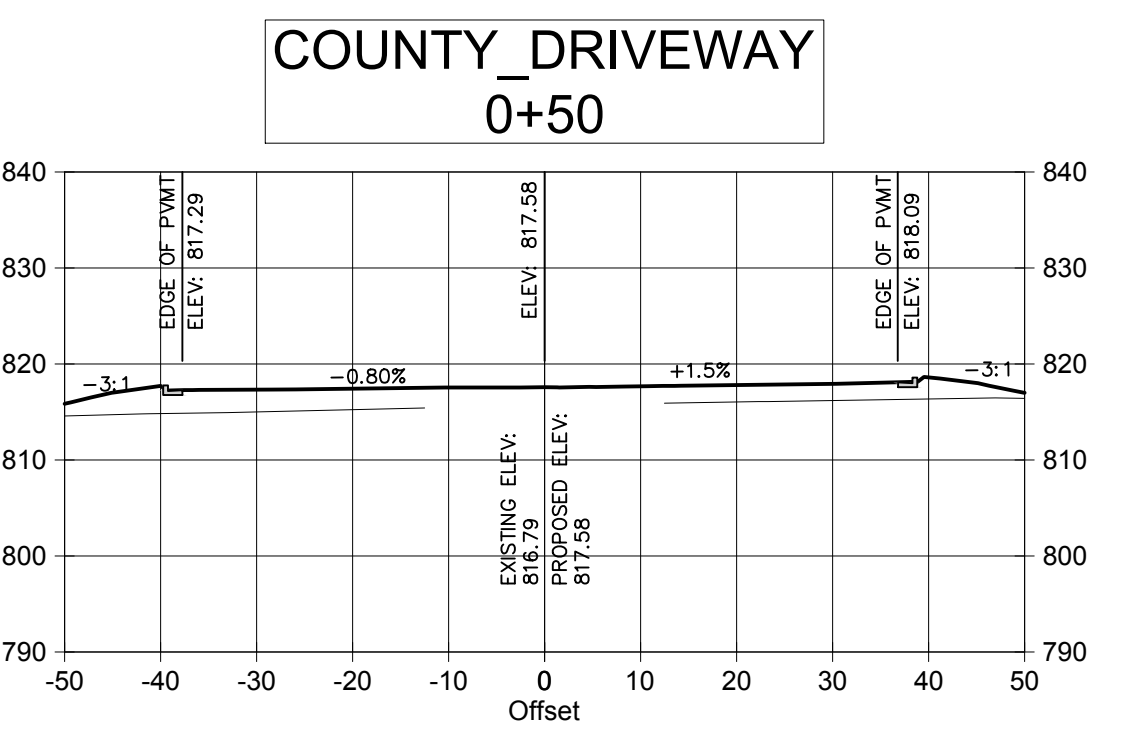
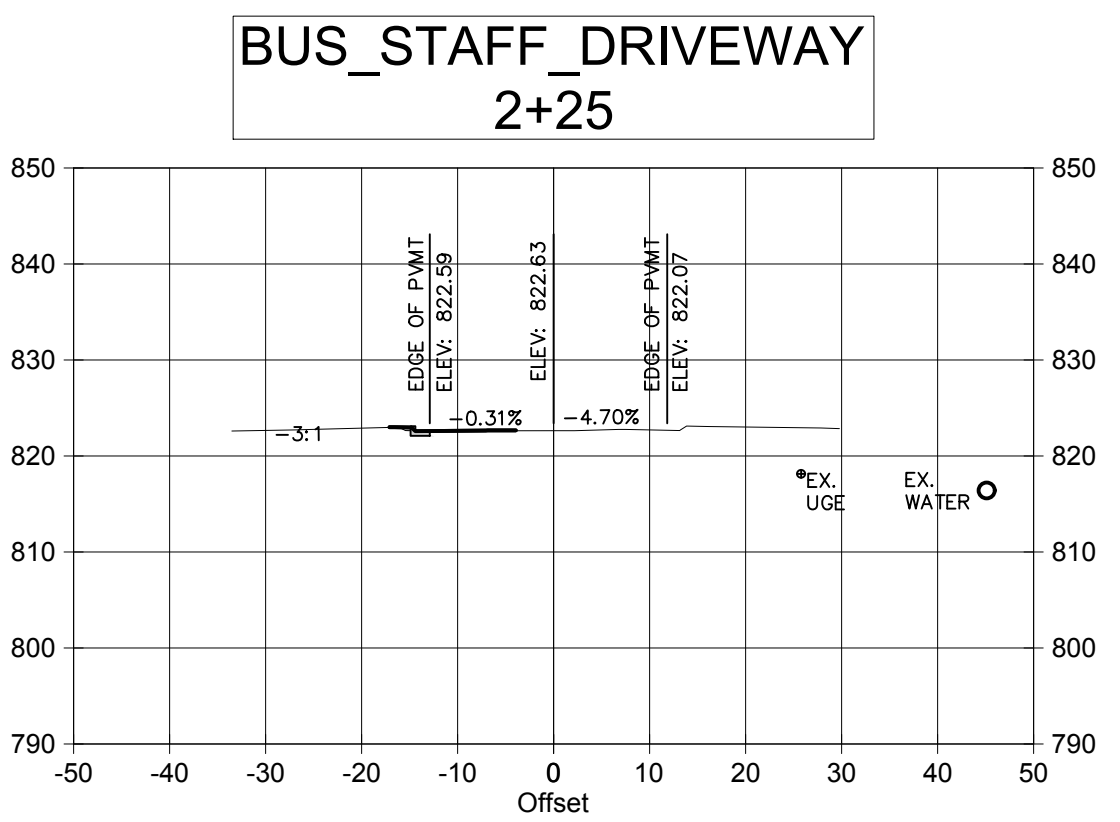
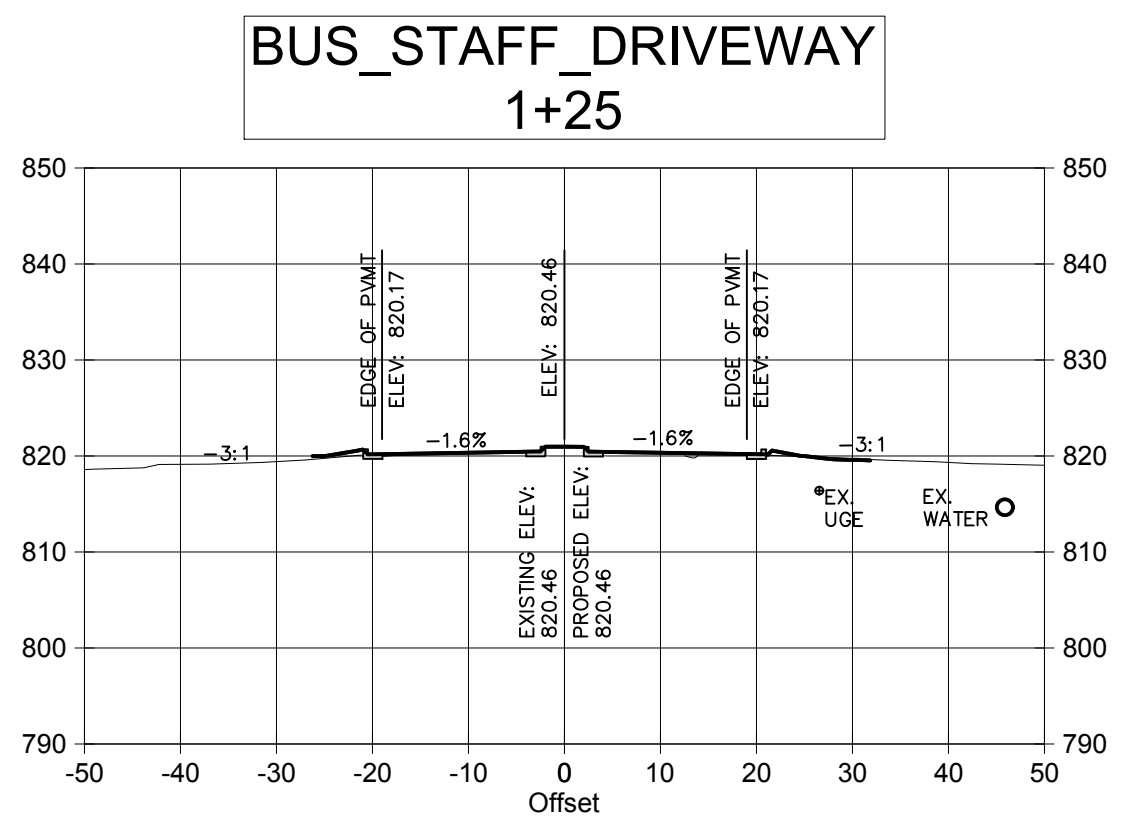
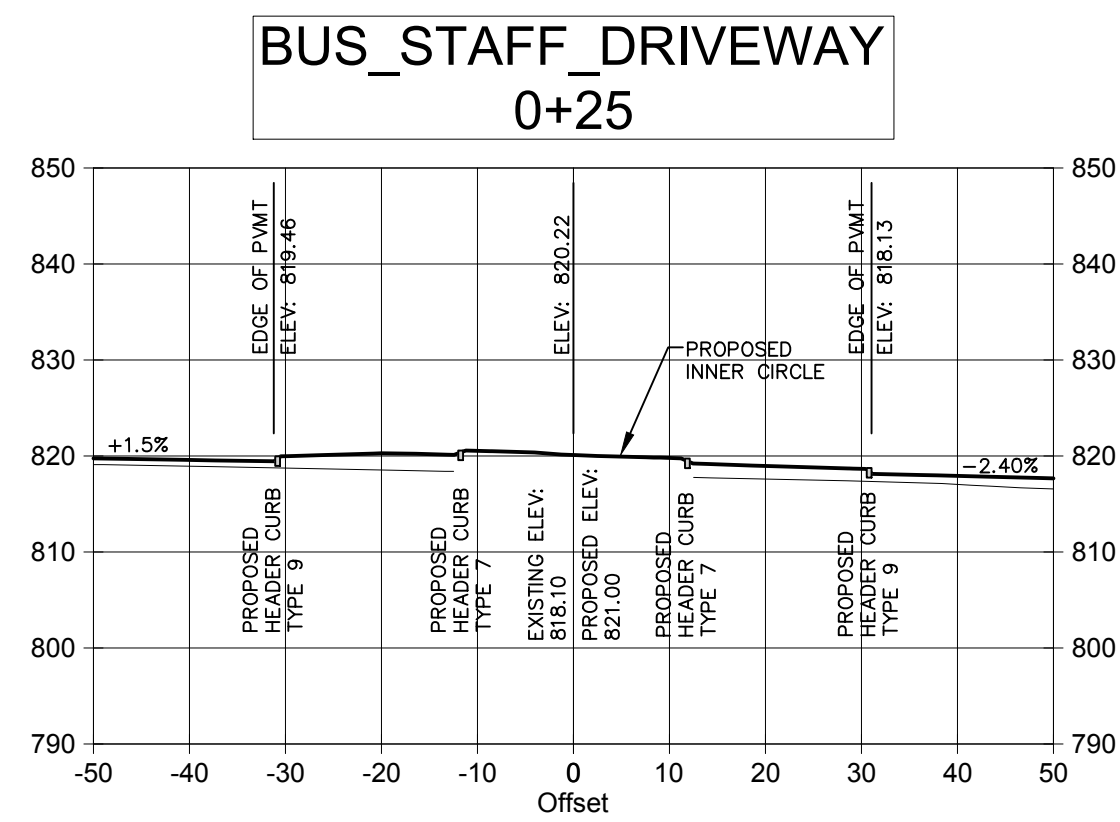
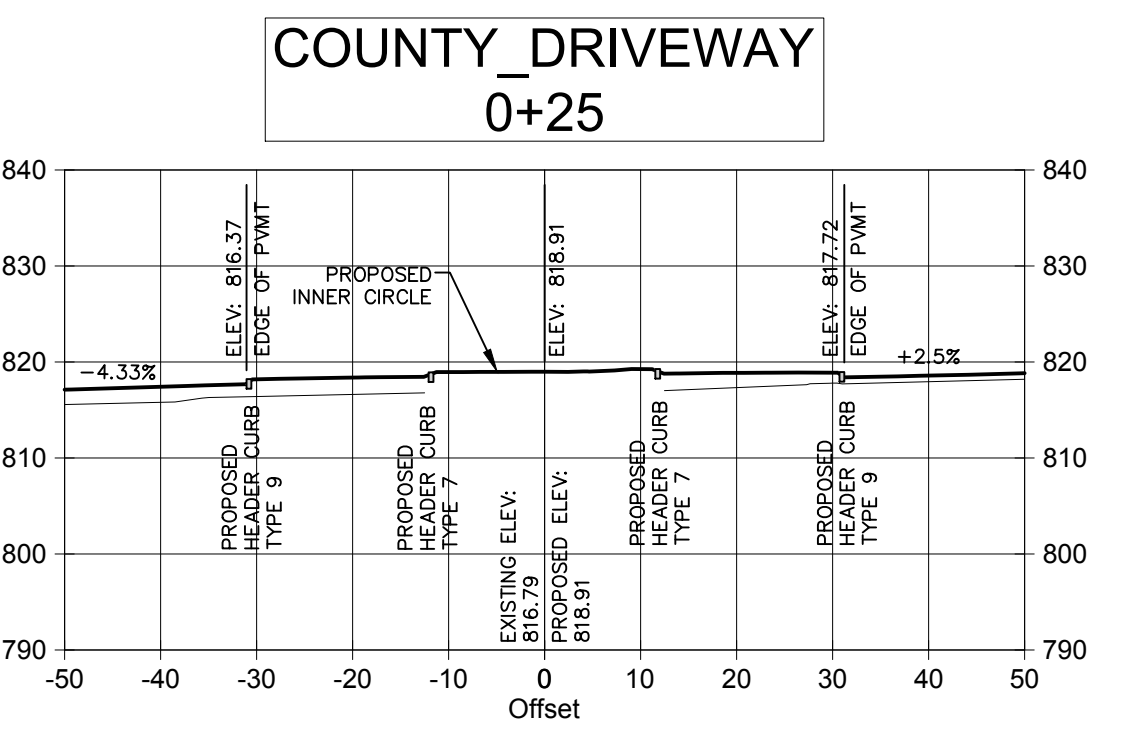
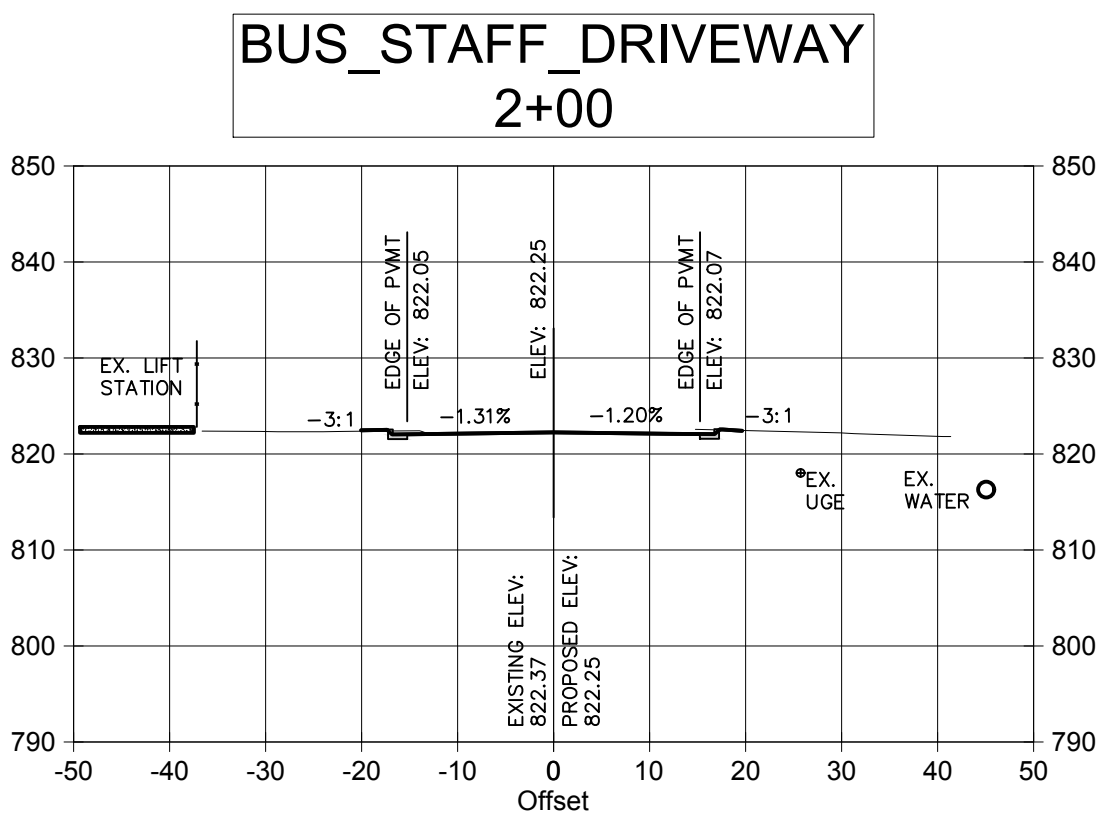
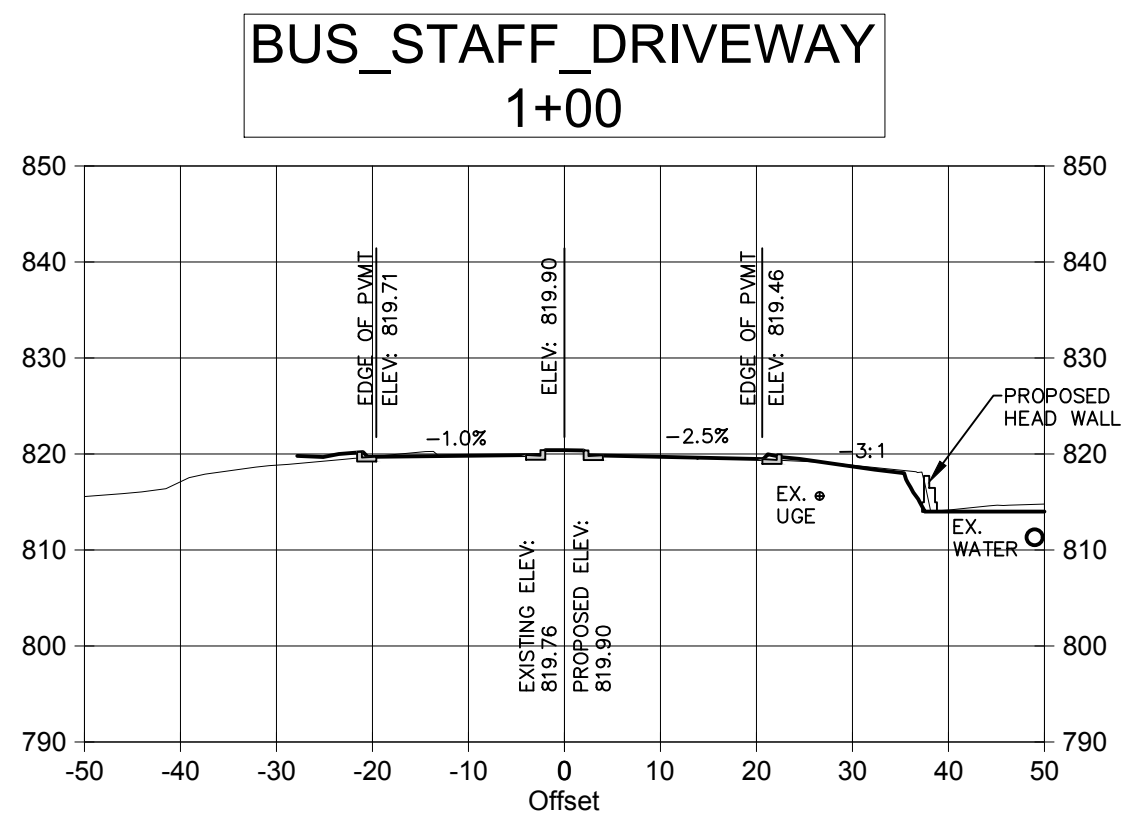
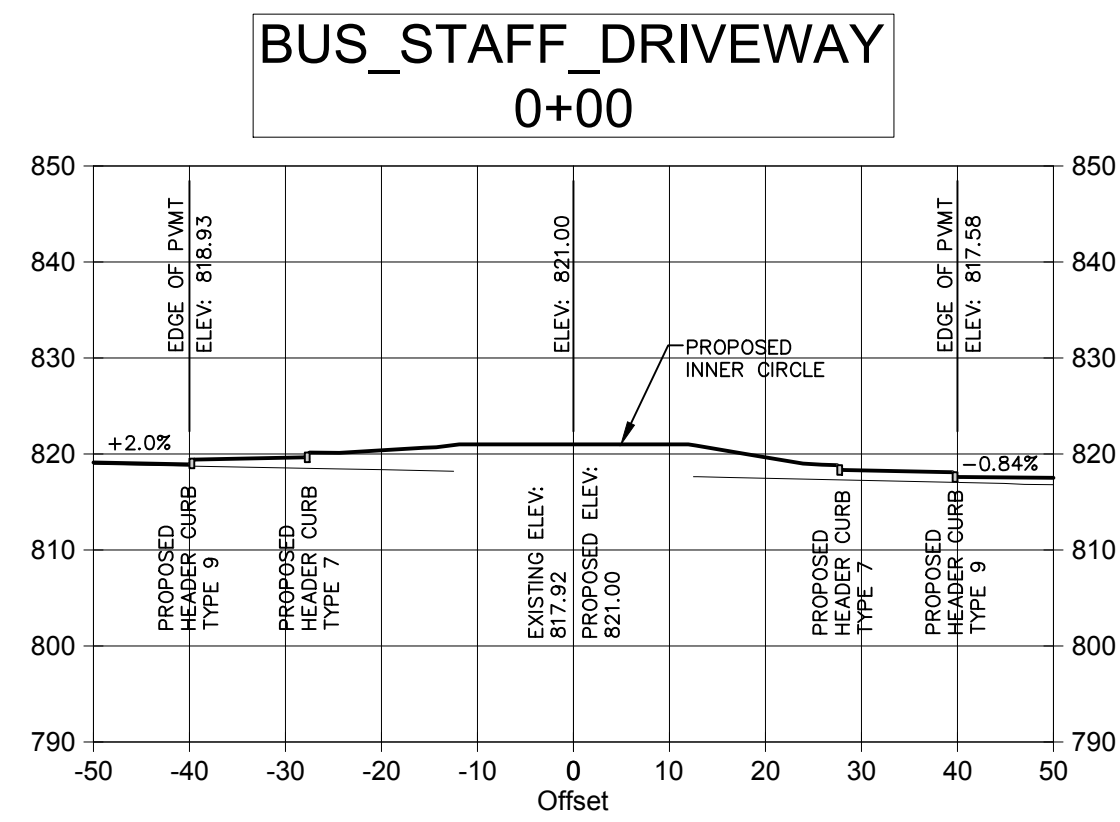
PROJECT NAME:
**ROUNDABOUT
PLANS**

SHEET TITLE:
**COMMERCE DR
C.S.**

SHEET NUMBER:
C-5.14

PROJECT NUMBER:
18001OCG

DATE:
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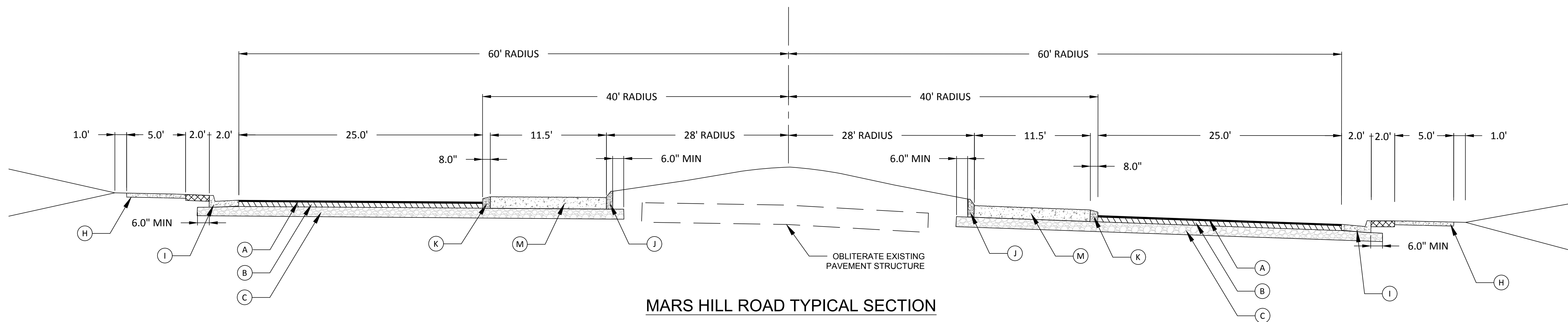
PROJECT NAME:
ROUNDABOUT PLANS

SHEET TITLE:
DRIVWAY C.S.

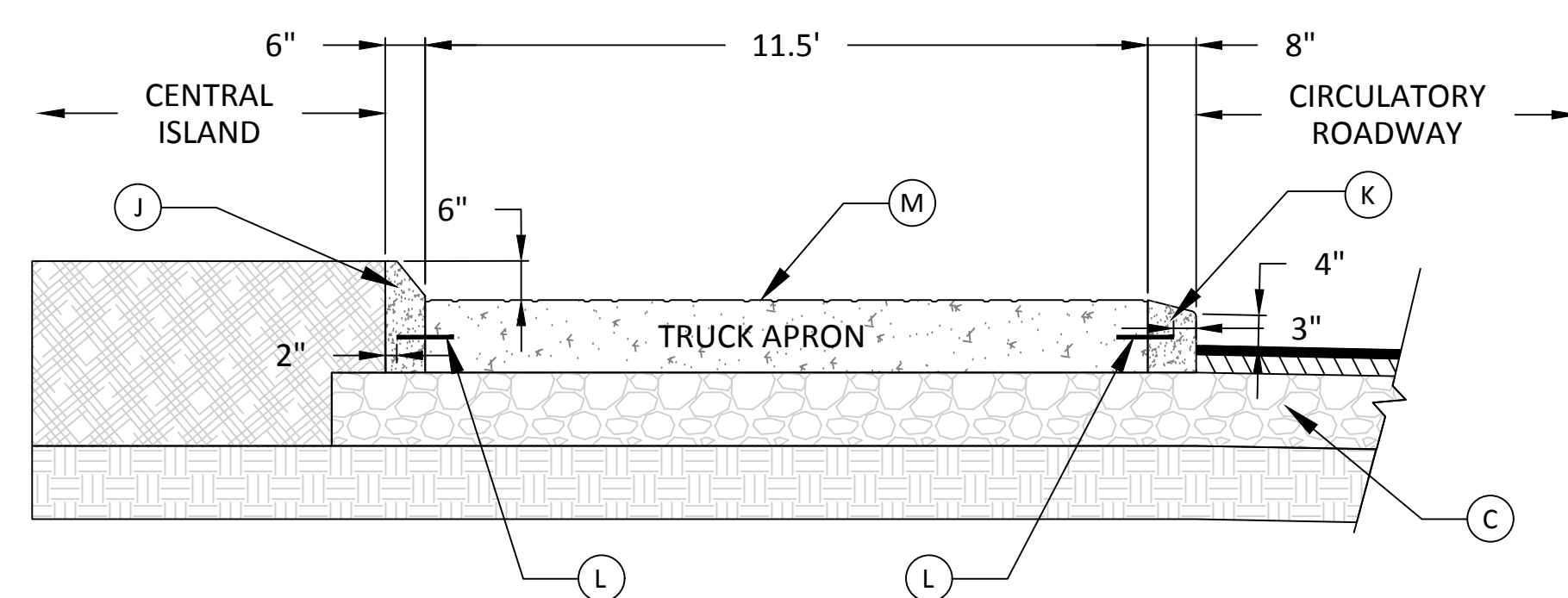
SHEET NUMBER:
C-5.15

PROJECT NUMBER:
18001OCG

DATE:
04/01/19



MARS HILL ROAD TYPICAL SECTION

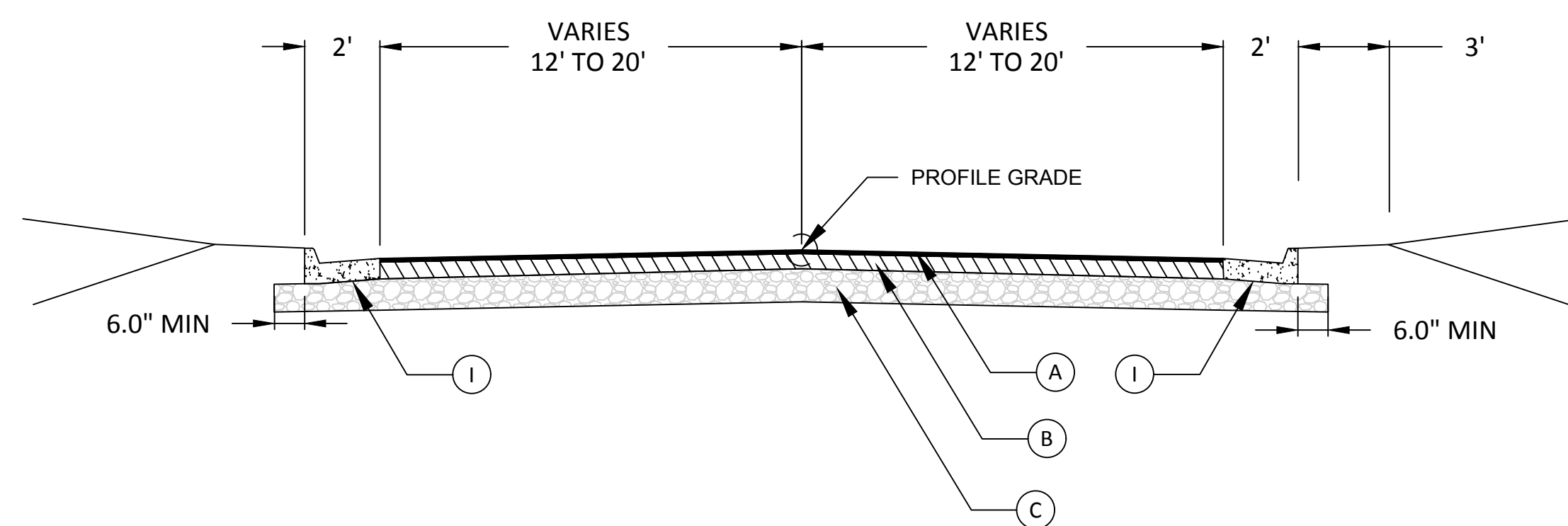


TRUCK APRON PAVING DETAIL

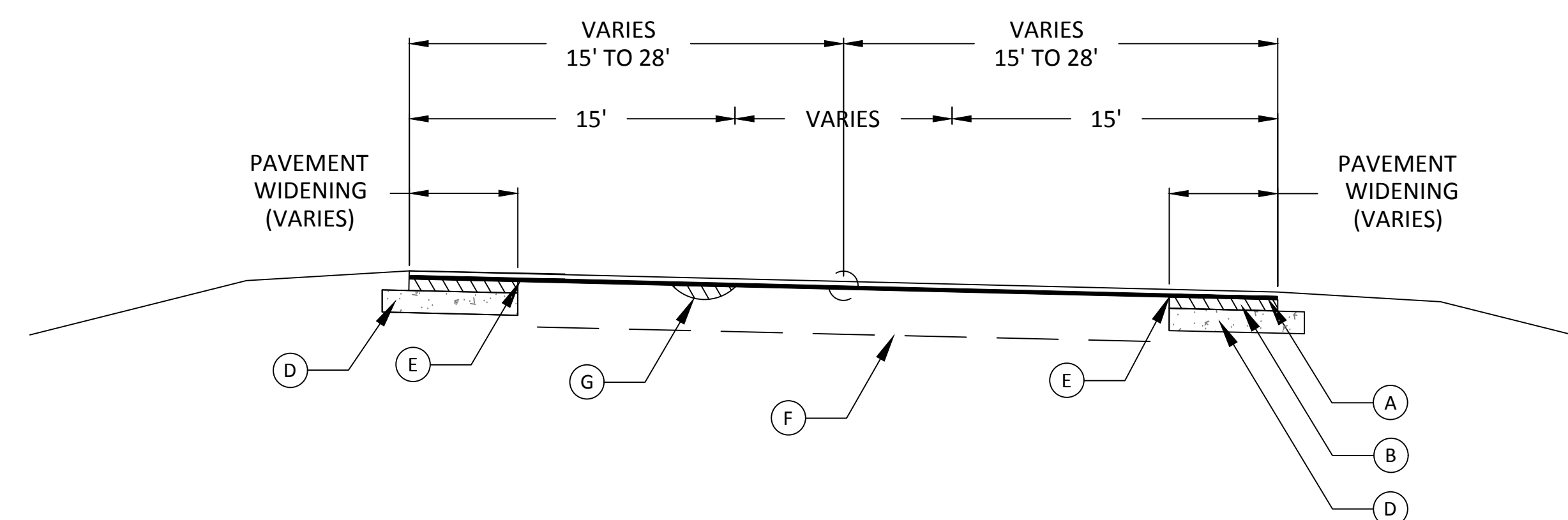
REQUIRED PAVEMENT LEGEND

- (A) SURFACE - 1 1/2" RECYCLED ASPHALTIC CONCRETE, 12.5 mm SUPERPAVE, GP 2 ONLY, INCL BITUM MATL & H LIME (165 LBS/YD)
- (B) ASPHALT BINDER COURSE - 4" RECYCLED ASPHALTIC CONCRETE, 19 mm SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME (220 LBS/YD), 2" MAXIMUM LIFT THICKNESS
- (C) 8" GRADED AGGREGATE BASE
- (D) 6" THICK PORTLAND CEMENT CONCRETE
- (E) PAVEMENT REINFORCEMENT FABRIC
- (F) EXISTING ROAD STRUCTURE
- (G) ASPHALT LEVELING, AS REQUIRED
- (H) CONCRETE SIDEWALK, 4" THICK
- (I) 6" X 24", CONC CURB AND GUTTER, TYPE 2
- (J) CONCRETE HEADER CURB, 6" TYPE 7
- (K) CONCRETE HEADER CURB, 8" TYPE 9
- (L) 18" X 8" DEFORMED TIE BARS, 18" ON CENTER
- (M) STAMPED AND COLORED 10" PC CONCRETE PAVEMENT, RED WITH COBBLE PATTERN

ALL AREAS OF SHOULDER WIDENING WILL REQUIRE 24 INCHES OF REMOVAL BELOW THE PROJECTED SUBGRADE ELEVATION. ONCE UNDERCUT, THESE AREAS SHALL BE SCARIFIED, COMPACTED AND PROOFROLLED WITH FULLY LOADED TANDEM AXLE DUMP TRUCK. BACKFILL AND COMPACTED TO A MINIMUM OF 95% DRY DENSITY STANDARD PROCTOR WITH GRANULAR FILL PLACED WITH SIX (6) TO EIGHT (8) INCH LOOSE LIFTS. THE FINAL TWELVE (12) INCHES (SUBGRADE) SHALL BE COMPACTED TO 100% DRY DENSITY. PROOFROLL AREA AGAIN ONCE SUBGRADE HAS PASSED COMPACTION. HOT MIX ASPHALT, FULL DEPTH SECTION, SHALL THEN BE CONSTRUCTED.

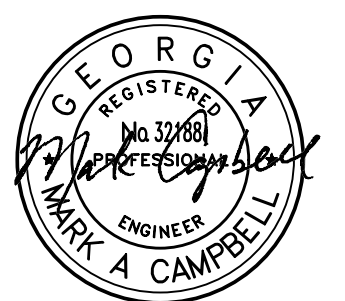


TYPICAL ROAD SECTION

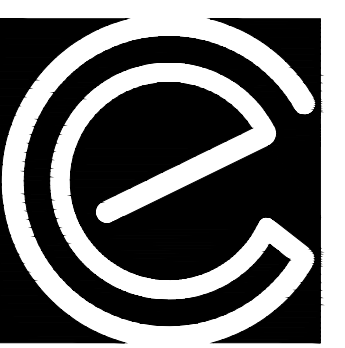


CLASS "B" CONCRETE BASE OR WIDENING DETAIL

REVISION BLOCK	REV. #	DATE	REVISION
	A	01/19/2019	INITIAL REVIEW
	B	03/19/2019	90% SUBMITTAL
	C	04/01/2019	ISSUE FOR REVIEW
	D	04/12/2019	CONTRACTOR BID



04/12/19



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www.carterengineering.net

ROUNDABOUT PLANS
for
OCONEE COUNTY GOVERNMENT
STAFF AND BUS ENTRANCE AND MALCOM BRIDGE RD.

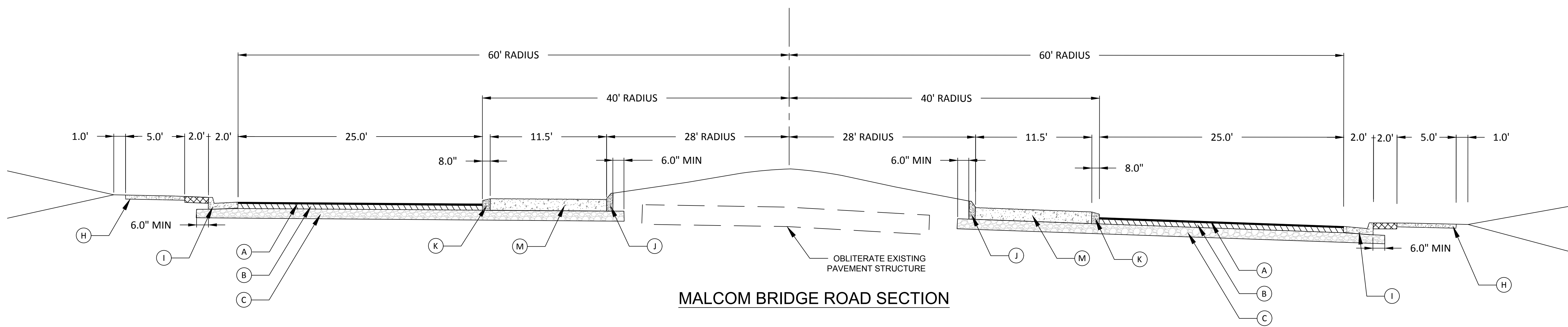
PROJECT NAME:
ROUNDABOUT
PLANS

SHEET TITLE:
TYPICAL
SECTION

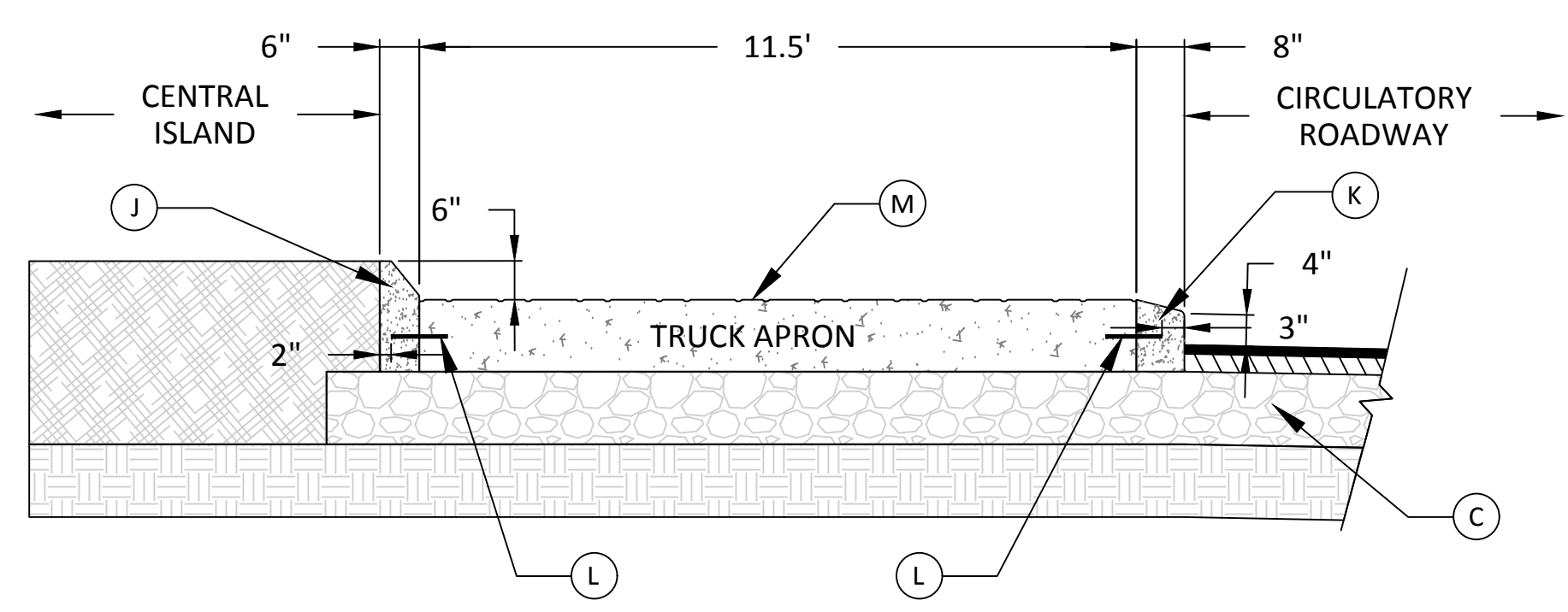
SHEET NUMBER:
C-5.16

PROJECT NUMBER:
18001OCG

DATE:
04/01/19



MALCOM BRIDGE ROAD SECTION

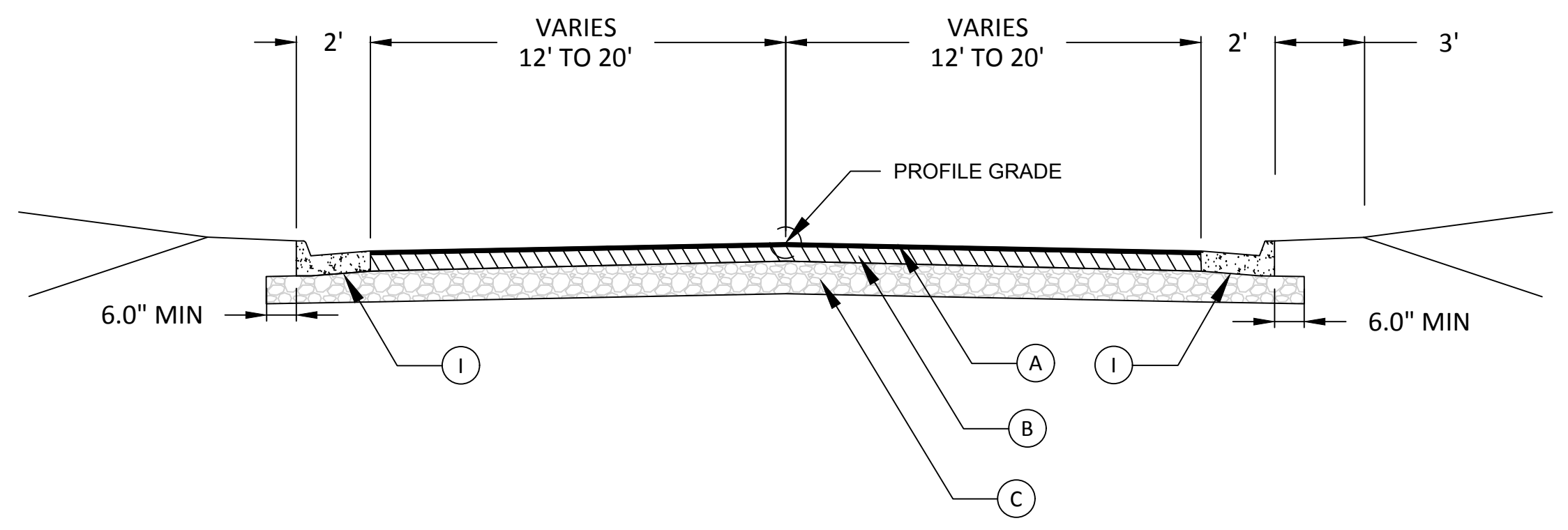


TRUCK APRON PAVING DETAIL

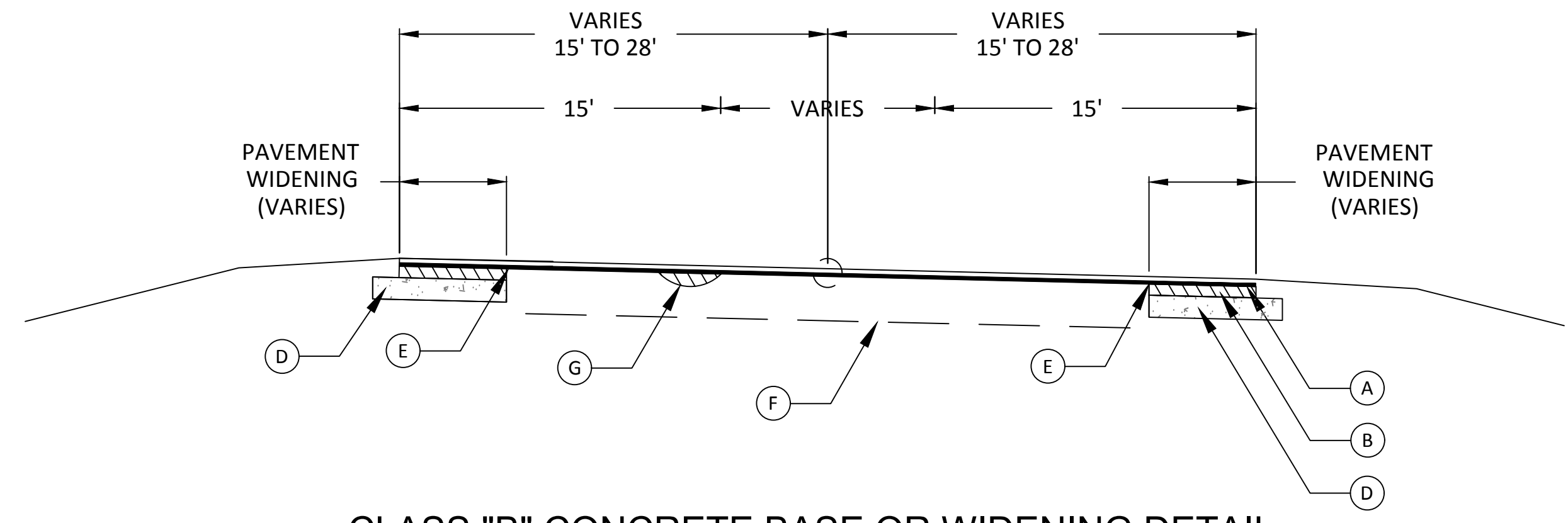
REQUIRED PAVEMENT LEGEND

- (A) SURFACE - 1 1/2" RECYCLED ASPHALTIC CONCRETE, 12.5 mm SUPERPAVE, GP 2 ONLY, INCL BITUM MATL & H LIME (165 LBS/YD)
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- (F) EXISTING ROAD STRUCTURE
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TYPICAL ROAD SECTION

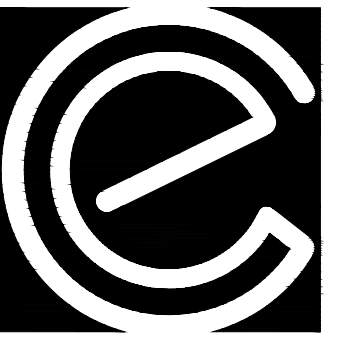


CLASS "B" CONCRETE BASE OR WIDENING DETAIL

REVISION BLOCK:	REV #	DATE	REVISION
	A	01/19/2019	INITIAL REVIEW
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04/12/19



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ROUNDABOUT PLANS
for
OCONEE COUNTY GOVERNMENT
STAFF AND BUS ENTRANCE AND MALCOM BRIDGE RD.

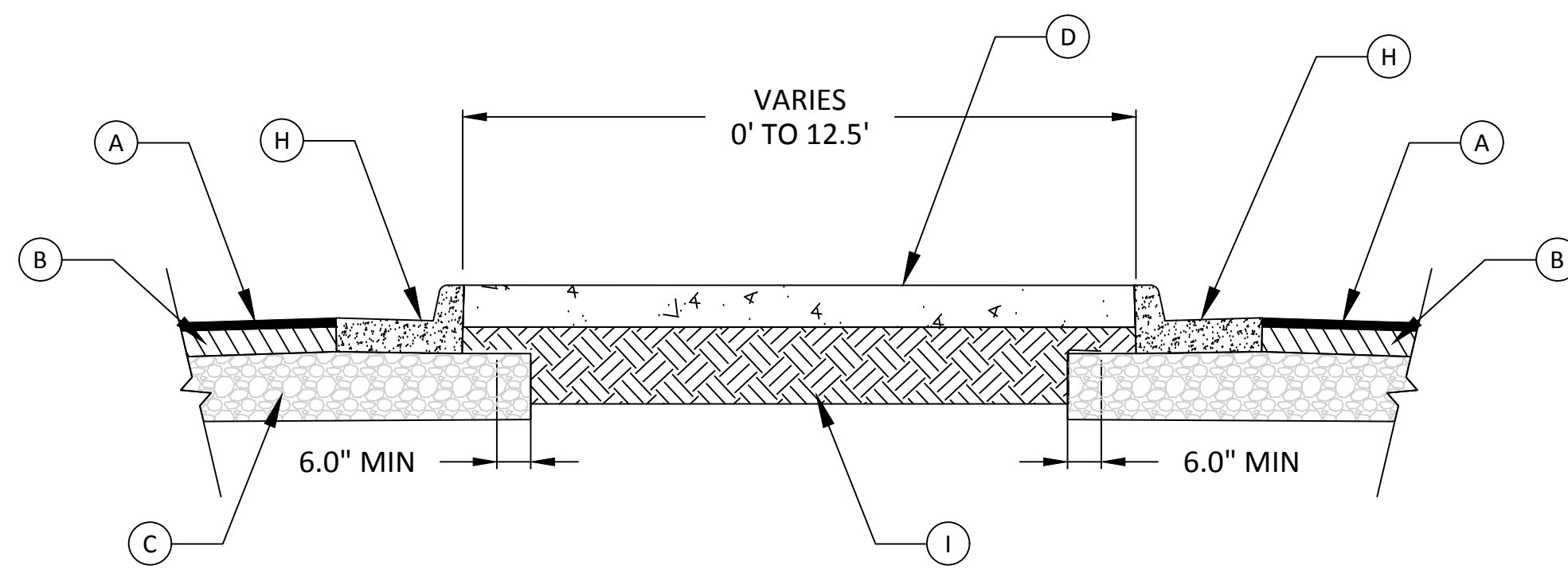
PROJECT NAME:
ROUNDABOUT PLANS

SHEET TITLE:
TYPICAL SECTION

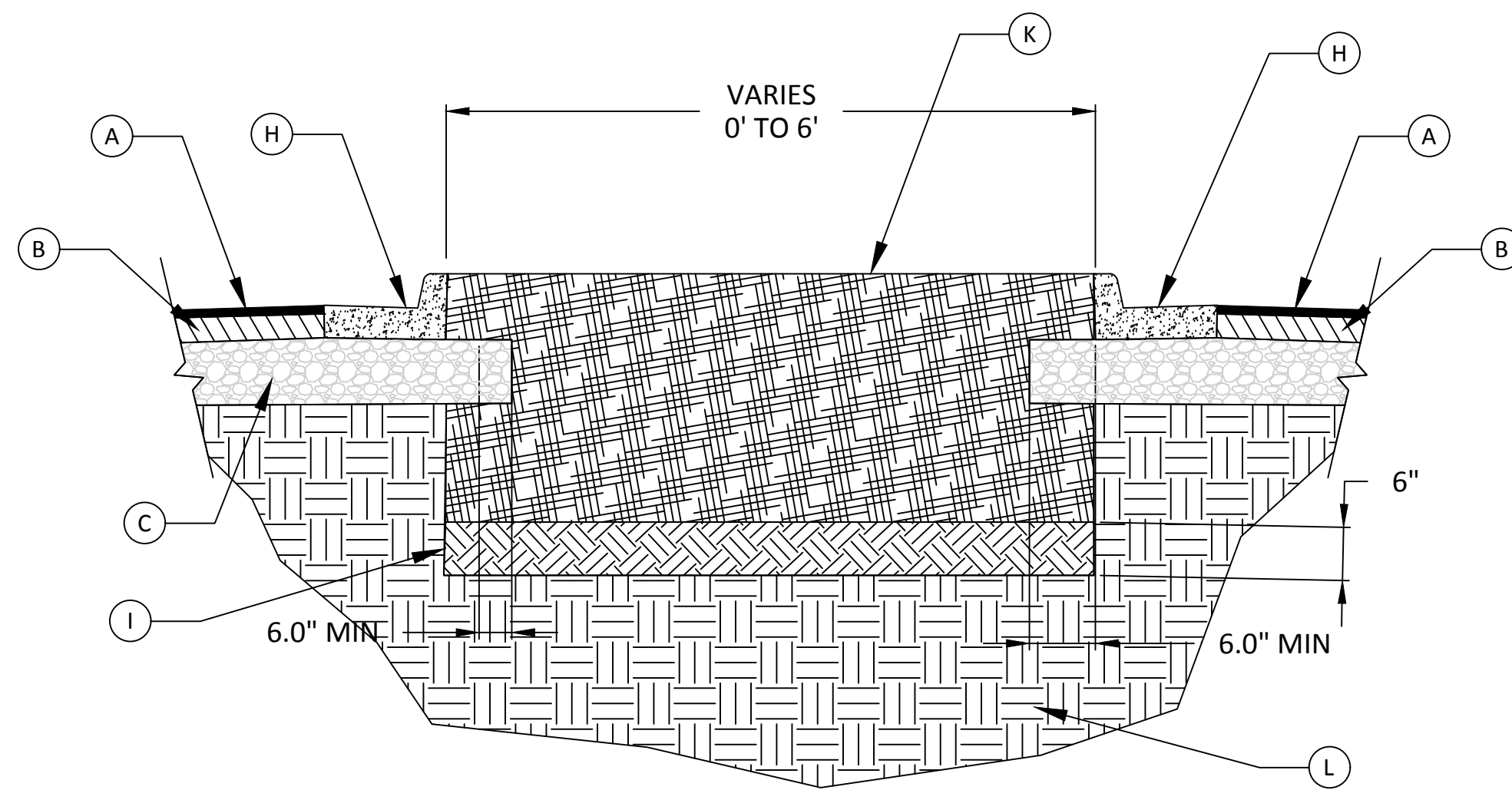
SHEET NUMBER:
C-5.17

PROJECT NUMBER:
180010CG

DATE:
04/01/19



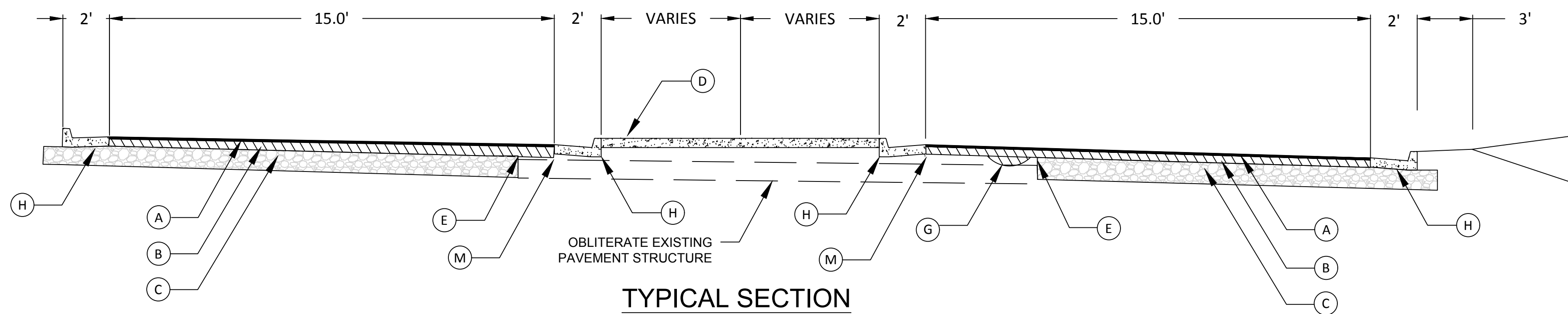
CONCRETE DIVERTER ISLAND DETAIL



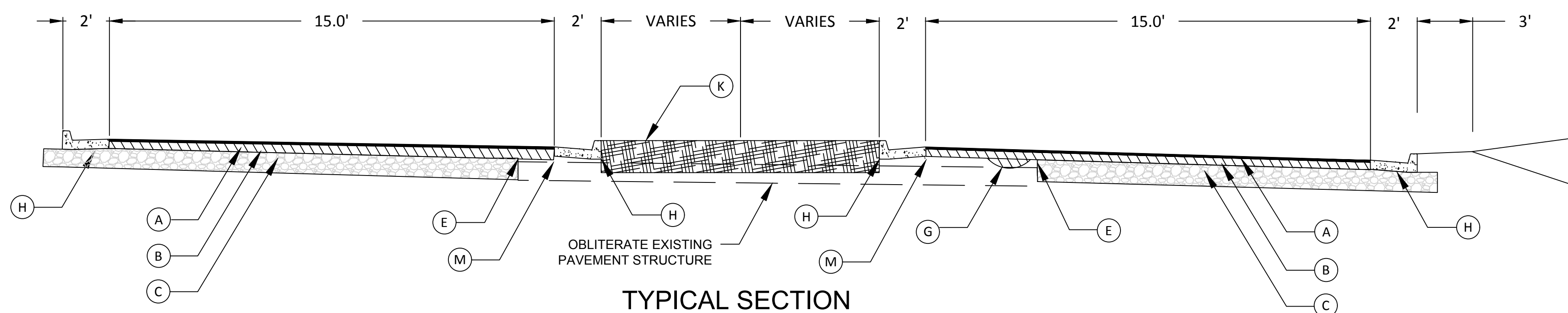
LANDSCAPED DIVERTER ISLAND DETAIL

REQUIRED PAVEMENT LEGEND

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- (G) ASPHALT LEVELING, AS REQUIRED
- (H) 6" X 24" CONC CURB AND GUTTER, TYPE 2
- (I) COMPACTED EARTH FILL
- (K) ADMIXTURE BACKFILL
- (L) NATIVE SOIL, REMOVE IMPERVIOUS DEBRIS
- (M) SAW CUT EXISTING ASPHALT



TYPICAL SECTION

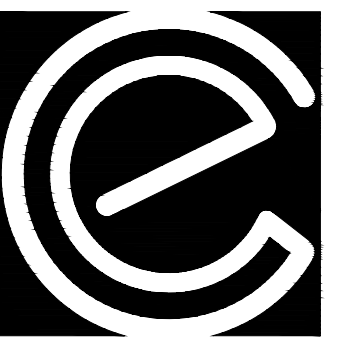


TYPICAL SECTION

REVISION BLOCK:	REV. #	DATE	REVISION
	A	07/19/2019	INITIAL REVIEW
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04/12/19



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ROUNDABOUT PLANS
for
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STAFF AND BUS ENTRANCE AND MALCOM BRIDGE RD.

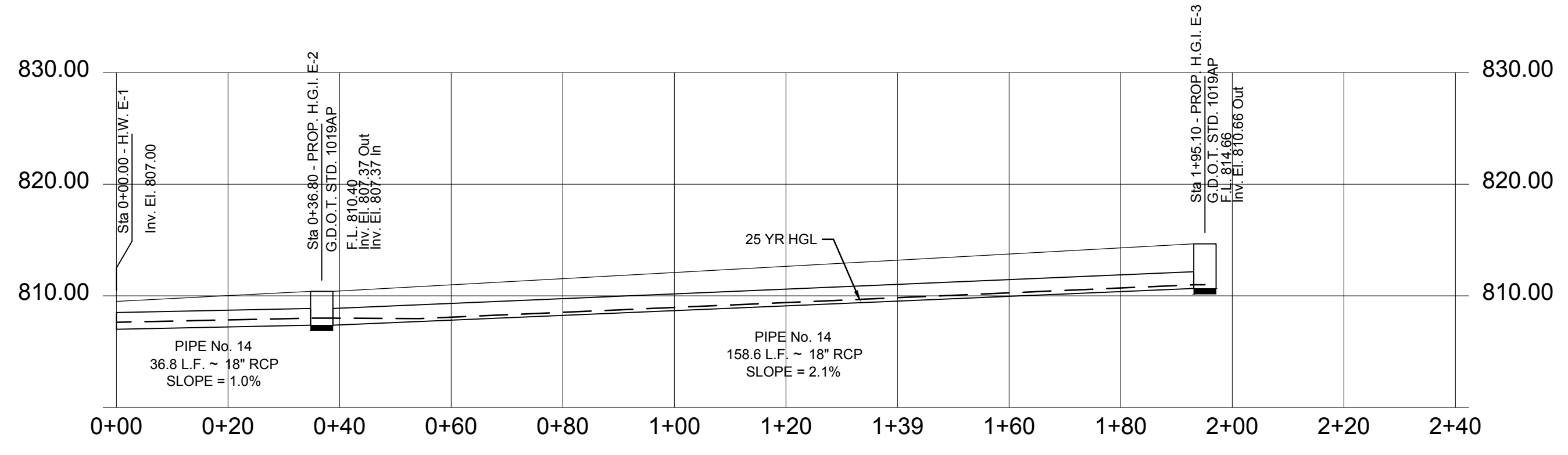
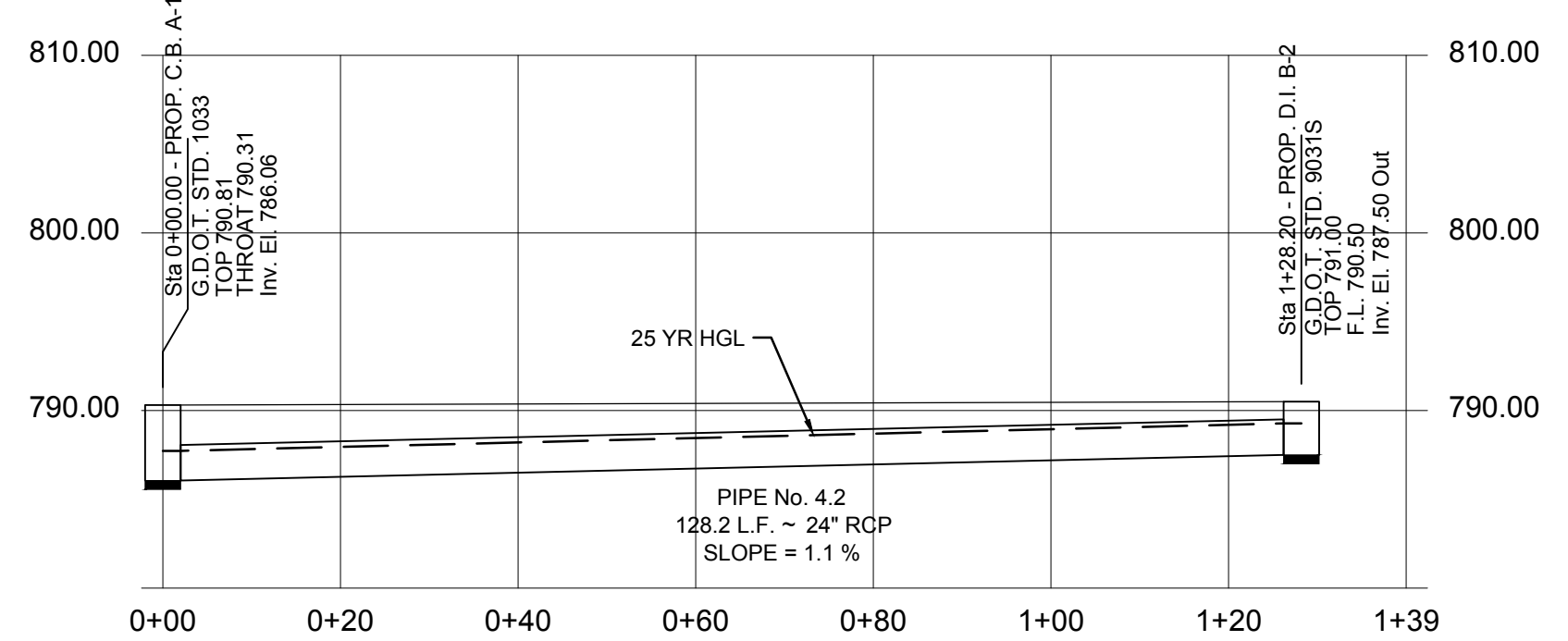
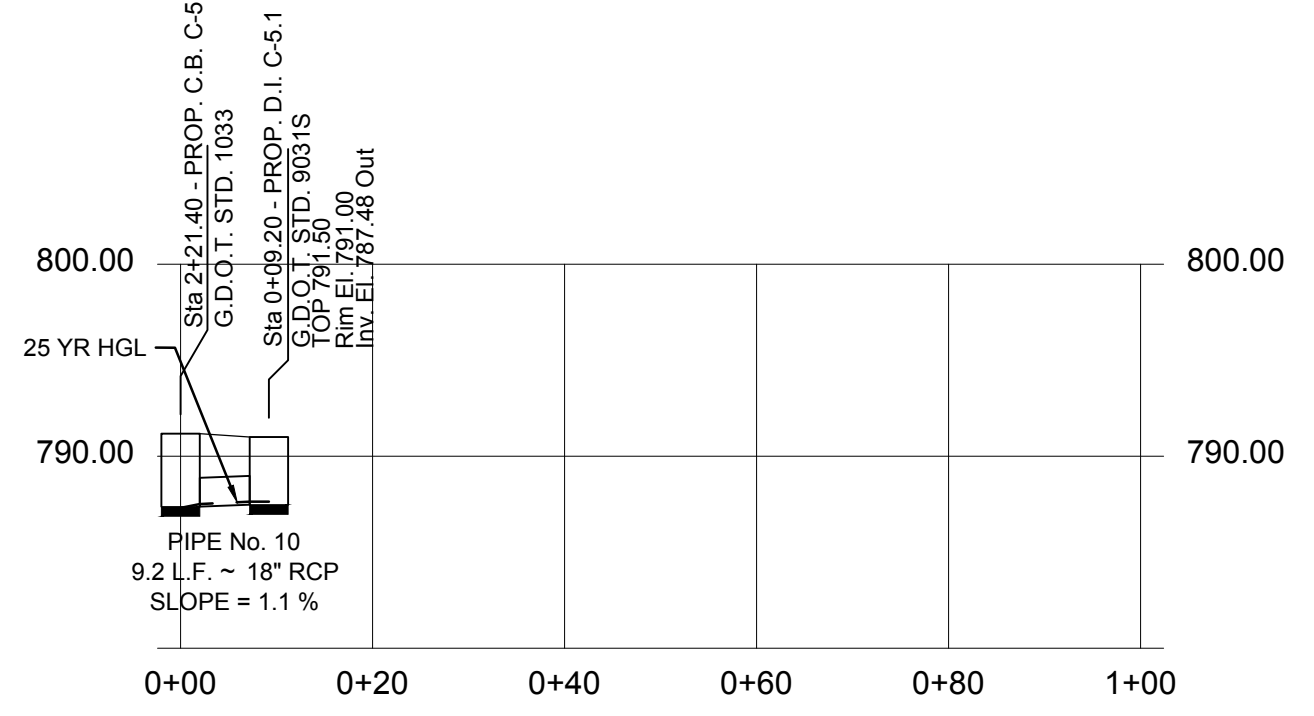
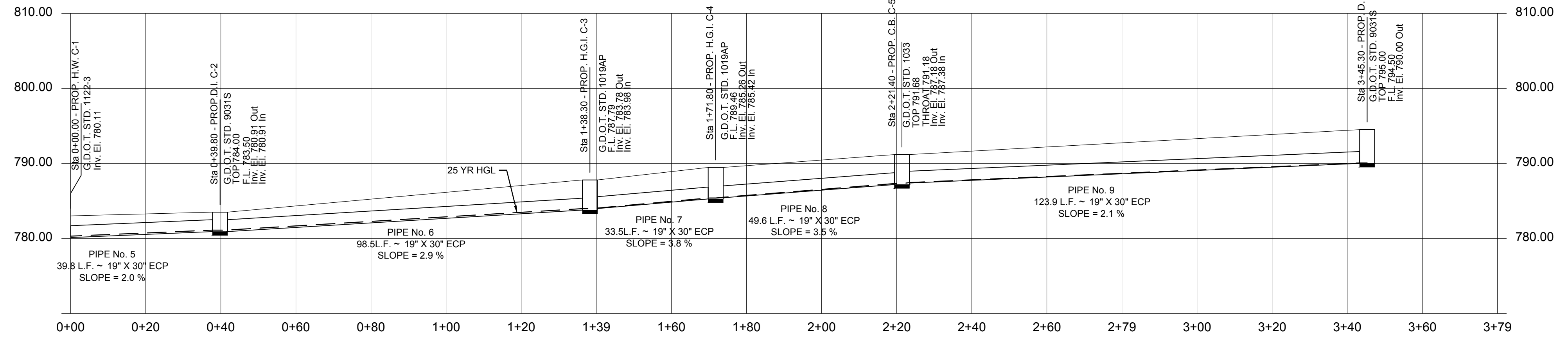
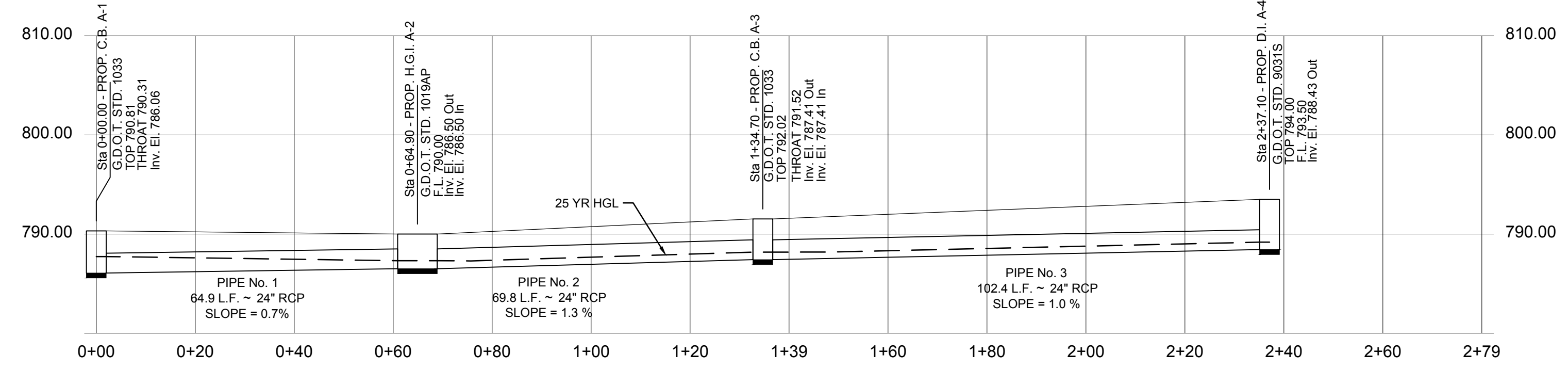
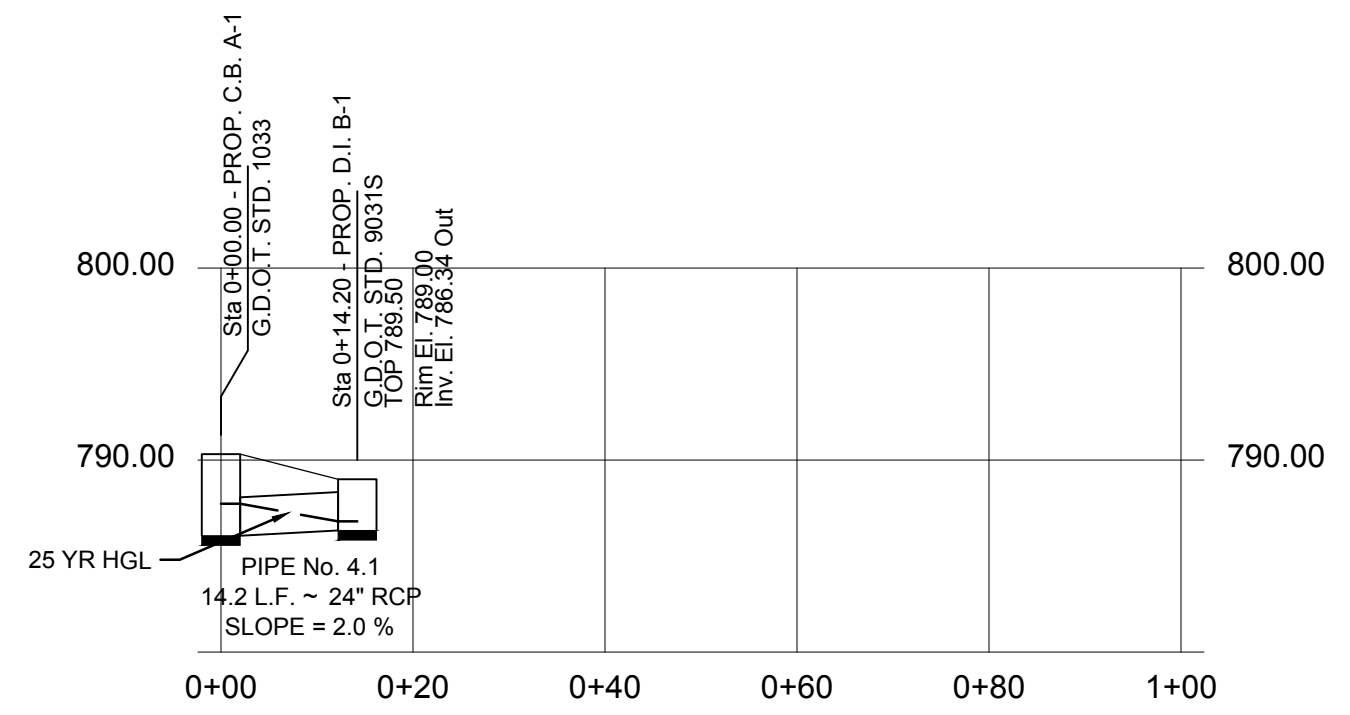
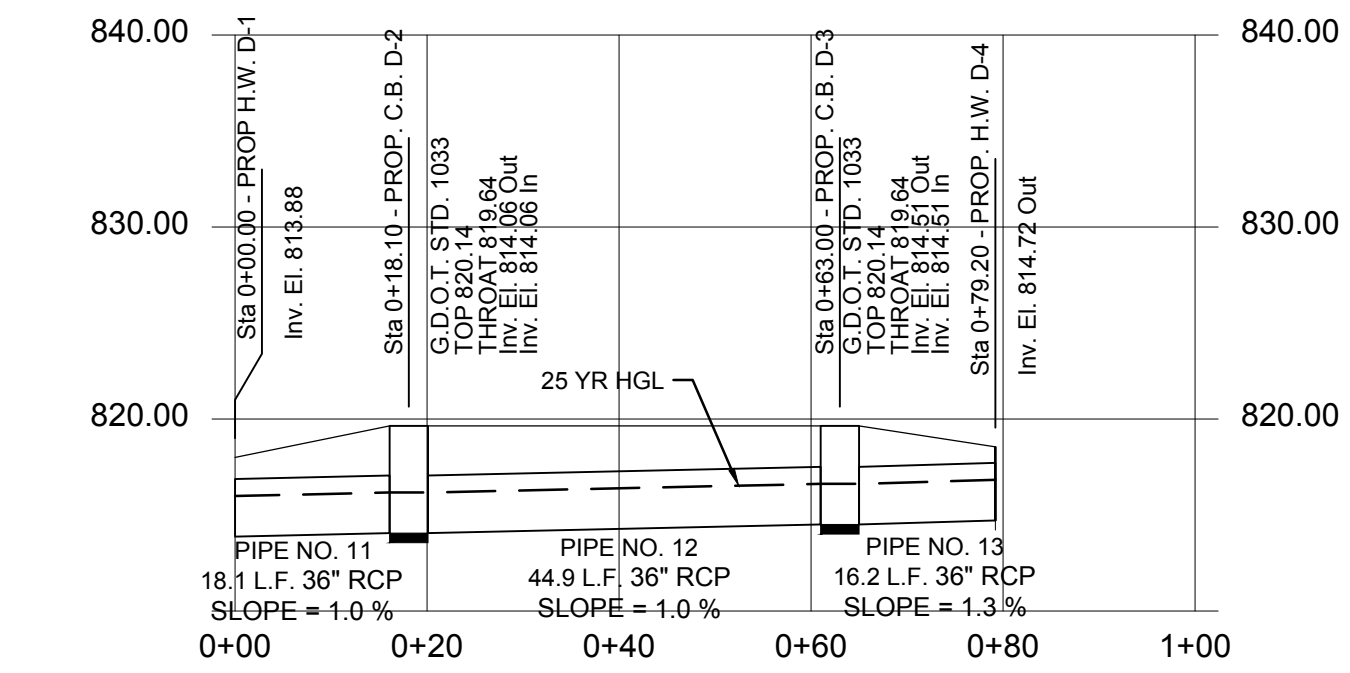
PROJECT NAME:
ROUNDABOUT PLANS

SHEET TITLE:
TYPICAL SECTION

SHEET NUMBER:
C-5.18

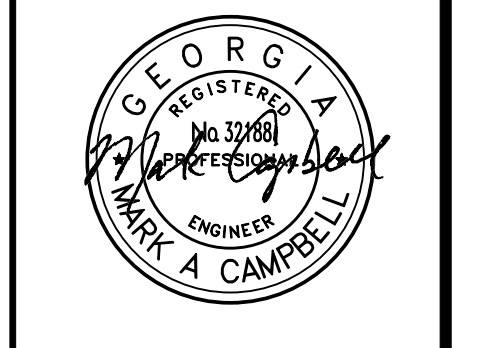
PROJECT NUMBER:
18001OCG

DATE:
04/01/19



25- YR STORM SEWER PROFILES										
SCALE: 1(in) = 20 (ft) H, 1(in) = 10(ft) V										
Pipe No.	Flow (cfs)	Size (in)	Mat'l	Length (ft)	I.E. Down (ft)	I.E. Up (ft)	Slope (%)	HGL Down (ft)	HGL Up (ft)	Velocity (ft/s)
1	5.20	24	RCP	64.9	786.06	786.50	0.7	787.73	787.30	3.13
2	4.70	24	RCP	69.8	786.50	787.41	1.3	787.30	788.17	4.13
3	4.54	24	RCP	102.4	787.41	788.43	1.0	788.17	789.18	4.18
4.1	1.84	24	RCP	14.2	786.06	786.34	2.0	787.73	786.81	1.97
4.2	25.44	24	RCP	128.2	786.06	787.50	1.1	787.73	789.27	8.87
5	0.19	19 x 30	ECP	39.8	780.11	780.91	2.0	780.30	781.10	1.21
6	0.17	19 x 30	ECP	98.5	780.91	783.78	2.9	781.11	783.97	1.08
7	0.12	19 x 30	ECP	33.5	783.98	785.26	3.8	784.04	785.39	1.78
8	0.09	19 x 30	ECP	49.6	785.42	787.18	3.5	785.48	787.31	1.34
9	0.03	19 x 30	ECP	123.9	787.38	790.00	2.1	787.44	790.06	0.62
10	0.17	18	RCP	9.2	787.38	787.48	1.1	787.51	787.63	2.06
11	42.15	36	RCP	18.1	813.88	814.06	1.0	815.99	816.17	7.93
12	42.15	36	RCP	44.9	814.06	814.51	1.0	816.17	816.62	7.92
13	42.15	36	RCP	16.2	814.51	814.72	1.3	816.62	816.83	7.92
14	2.74	18	RCP	36.8	807.00	807.37	1.0	807.63	808.00	3.91
15	0.78	18	RCP	158.3	807.37	810.66	2.1	808.00	810.99	1.93

REV #	DATE	REVISION
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04/12/19



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ROUNDABOUT PLANS
 for
 OCONEE COUNTY GOVERNMENT
 STAFF AND BUS ENTRANCE AND MALCOM BRIDGE RD.

PROJECT NAME:
ROUNDABOUT PLANS

SHEET TITLE:
STORM PROFILES

SHEET NUMBER:
C-6.1

PROJECT NUMBER:
18001OCG

DATE:
04/01/19

STATE PROJECT NUMBER SHEET TOTALS
GA. CA. 1001-B

QUANTITIES ONE ENDWALL WITH 45° WINGS

OPENING	WALL	FOOTING	CLASS	% CONCRETE	STEEL REIN
12	1.8	2.0	1.0	1.0	1.0
15	2.3	2.7	1.0	1.0	1.0
18	2.9	3.4	1.0	1.0	1.0
24	3.7	4.5	1.0	1.0	1.0
30	4.5	5.4	1.0	1.0	1.0
36	5.3	6.3	1.0	1.0	1.0
42	6.1	7.2	1.0	1.0	1.0
48	6.9	8.1	1.0	1.0	1.0
54	7.7	9.0	1.0	1.0	1.0
60	8.5	9.9	1.0	1.0	1.0
66	9.3	10.8	1.0	1.0	1.0
72	10.1	11.7	1.0	1.0	1.0
78	10.9	12.6	1.0	1.0	1.0
84	11.7	13.5	1.0	1.0	1.0
90	12.5	14.4	1.0	1.0	1.0
96	13.3	15.3	1.0	1.0	1.0
102	14.1	16.2	1.0	1.0	1.0
108	14.9	17.1	1.0	1.0	1.0
114	15.7	18.0	1.0	1.0	1.0
120	16.5	18.9	1.0	1.0	1.0

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
STANDARD PIPE CULVERT CONCRETE HEADWALL
REV. & REOR. AUG. 1999
DESIGNED: [Signature] CHECKED: [Signature]
NO SCALE SUBMITTED: [Signature] APPROVED: [Signature]
REV. & REOR. AUG. 1999 NUMBER 1001-B

STATE PROJECT NUMBER SHEET TOTALS
GA. CA. 1019A

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
STANDARD DROP INLETS (BUILT-IN-PLACE)
REV. & REOR. AUG. 1999
DESIGNED: [Signature] CHECKED: [Signature]
NO SCALE SUBMITTED: [Signature] APPROVED: [Signature]
REV. & REOR. AUG. 1999 NUMBER 1019A

STATE PROJECT NUMBER SHEET TOTALS
GA. CA. 1030D

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
STANDARD CONCRETE & METAL PIPE CULVERTS SHEET 1030
(TRENCH CONSTRUCTION, BEDDING, BACKFILL)
REV. & REOR. SEPT., 2008
DESIGNED: [Signature] CHECKED: [Signature]
NO SCALE SUBMITTED: [Signature] APPROVED: [Signature]
REV. & REOR. SEPT., 2008 NUMBER 1030D

TABLE NO. 1 ROUND PIPE - CORRUGATED STEEL - CORRUGATED ALUMINUM
MINIMUM CLASS OF CONCRETE OR MINIMUM THICKNESS OF STEEL AND ALUMINUM

PIPE DIAMETER (INCHES)	MINIMUM COVER (INCHES)	HEIGHT OF FILL IN FEET ABOVE TOP OF PIPE	CONCRETE CLASS	STEEL THICKNESS (INCHES)	ALUMINUM THICKNESS (INCHES)
12	12	10-15	III	0.060	0.064
		15-20	IV	0.064	0.068
15	15	10-15	III	0.064	0.068
		15-20	IV	0.068	0.072
18	18	10-15	III	0.068	0.072
		15-20	IV	0.072	0.076
24	24	10-15	III	0.072	0.076
		15-20	IV	0.076	0.080
30	30	10-15	III	0.076	0.080
		15-20	IV	0.080	0.084
36	36	10-15	III	0.080	0.084
		15-20	IV	0.084	0.088
42	42	10-15	III	0.084	0.088
		15-20	IV	0.088	0.092
48	48	10-15	III	0.088	0.092
		15-20	IV	0.092	0.096
54	54	10-15	III	0.092	0.096
		15-20	IV	0.096	0.100
60	60	10-15	III	0.096	0.100
		15-20	IV	0.100	0.104
66	66	10-15	III	0.100	0.104
		15-20	IV	0.104	0.108
72	72	10-15	III	0.104	0.108
		15-20	IV	0.108	0.112
78	78	10-15	III	0.108	0.112
		15-20	IV	0.112	0.116
84	84	10-15	III	0.112	0.116
		15-20	IV	0.116	0.120
90	90	10-15	III	0.116	0.120
		15-20	IV	0.120	0.124
96	96	10-15	III	0.120	0.124
		15-20	IV	0.124	0.128
102	102	10-15	III	0.124	0.128
		15-20	IV	0.128	0.132
108	108	10-15	III	0.128	0.132
		15-20	IV	0.132	0.136
114	114	10-15	III	0.132	0.136
		15-20	IV	0.136	0.140
120	120	10-15	III	0.136	0.140
		15-20	IV	0.140	0.144

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
STANDARD CONCRETE & METAL PIPE CULVERTS SHEET 2 OF 3 (FILL HEIGHTS FOR CONCRETE & CORRUGATED METAL PIPE)
NO SCALE SUBMITTED: [Signature] APPROVED: [Signature]
REV. & REOR. SEPT., 2008 NUMBER 1030D

REVISION BLOCK:

REV. #	DATE	REVISION
A	01/15/2019	INITIAL REVIEW
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D	04/12/2019	CONTRACTOR BID

04/12/19

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F: 770.725.1204
www.carterengineering.net

PROJECT NAME:
ROUNDABOUT PLANS

SHEET TITLE:
STANDARD DETAILS

SHEET NUMBER:
D-1.0

PROJECT NUMBER:
18010CG

DATE:
04/01/19

TABLE NO. 1R ROUND PIPE - SPIRAL RIB STEEL - SPIRAL RIB ALUMINUM

PIPE DIAMETER	MINIMUM COVER	MINIMUM THICKNESS	HEIGHT OF FLARE	MINIMUM COVER	MINIMUM THICKNESS	HEIGHT OF FLARE
12	12	12	80-90	12	12	80-90
15	15	15	70-80	15	15	70-80
18	18	18	60-70	18	18	60-70
24	24	24	50-60	24	24	50-60
30	30	30	40-50	30	30	40-50
36	36	36	35-40	36	36	35-40
42	42	42	30-35	42	42	30-35
48	48	48	25-30	48	48	25-30
54	54	54	20-25	54	54	20-25
60	60	60	15-20	60	60	15-20
66	66	66	10-15	66	66	10-15
72	72	72	1-10	72	72	1-10
78	78	78	1-10	78	78	1-10
84	84	84	1-10	84	84	1-10
90	90	90	1-10	90	90	1-10
96	96	96	1-10	96	96	1-10
102	102	102	1-10	102	102	1-10
108	108	108	1-10	108	108	1-10
114	114	114	1-10	114	114	1-10
120	120	120	1-10	120	120	1-10

R DENOTES SPIRAL RIB PROFILE 3/4" X 3/4" X 7/16"

TABLE VALUES FOR ALUMINUM SPIRAL RIB PIPE ARE COMPUTED BASED UPON ALUMINUM 7004-T6 HAVING MINIMUM YIELD STRENGTH TH. 95-24000 PSI. IF ALL MINIMUM COVER VALUES SHALL BE INCREASED BY 15 PERCENT. (EXAMPLE: 12 IN. BECOMES 13.8 IN.)

B. ALL HEIGHT OF FLARE VALUES SHALL BE DECREASED BY 15 PERCENT. (EXAMPLE: 35-40 FT. BECOMES 29.7-34.0 FT.)

MINIMUM COVER VALUES APPLY TO HS-20/ULV LOAD. MINIMUM COVER NEEDED FOR CONSTRUCTION VEHICLES MAY BE GREATER AND IS THE RESPONSIBILITY OF THE CONTRACTOR.

TRENCH CONSTRUCTION IS REQUIRED FOR ALL INSTALLATIONS.

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD
CONCRETE & METAL PIPE CULVERTS
SHEET 3 OF 3
(FILL HEIGHTS FOR SPIRAL RIB METAL PIPE & FOR PIPE ARCH)

NO SCALE

DESIGNED: [Signature]
CHECKED: [Signature]
DATE: SEPT., 2001

NUMBER
1030D

CATCH BASIN
(IF CATCH BASIN HAS LONGITUDINAL PIPE OVER 24" SEE DETAILS AT RIGHT)

DETAIL OF TOP SLAB, REINFORCING STEEL & CLEARANCES REQ'D.

CASTING DETAILS

SECTION I-I

SECTION A-A

SECTION J-J

SECTION F-F

SECTION B-B

SECTION H-H

DETAIL OF TOP REINFORCED CONCRETE SLAB

DETAIL OF TOP REINFORCED CONCRETE SLAB

PRECAST BOX ON BRICK

CONSTRUCTION ALTERNATES

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD
CATCH BASINS
FOR USE WITH CURB 12" HT. OR 4" HT. IN GUTTER

SCALE AS SHOWN

DESIGNED: [Signature]
CHECKED: [Signature]
DATE: SEPT., 1992

NUMBER
1033D

REVISION BLOCK

REV. #	DATE	REVISION
A	01/19/2019	INITIAL REVIEW
B	03/19/2019	90% SUBMITTAL
C	04/01/2019	ISSUE FOR REVIEW
D	04/12/2019	CONTRACTOR BID

04/12/19

CARTER ENGINEERING CONSULTANTS

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3651 Mars Hill Road, Suite 2000
Watkinsville, GA 30677
P: 770.725.1200
F: 770.725.1204
www.cartierengineering.net

METAL FLARED END SECTION
(USE ONLY WITH CORR. METAL PIPES)

CONCRETE FLARED END SECTION

FLARED END SECTION DIMENSIONS

PIPE DIAMETER	MINIMUM COVER	MINIMUM THICKNESS	HEIGHT OF FLARE
12	12	12	80-90
15	15	15	70-80
18	18	18	60-70
24	24	24	50-60
30	30	30	40-50
36	36	36	35-40
42	42	42	30-35
48	48	48	25-30
54	54	54	20-25
60	60	60	15-20
66	66	66	10-15
72	72	72	1-10
78	78	78	1-10
84	84	84	1-10
90	90	90	1-10
96	96	96	1-10
102	102	102	1-10
108	108	108	1-10
114	114	114	1-10
120	120	120	1-10

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD
FLARED END SECTIONS
FOR PIPES

NO SCALE

DESIGNED: [Signature]
CHECKED: [Signature]
DATE: SEPT., 1999

NUMBER
1120

ALTERNATE I

GENERAL NOTES

CONNECTIONS

SAFETY BARS

REINFORCED END OR ANGLE

SECTION A-A

SECTION B-B

TYPE #2 CONNECTOR DETAILS

TYPE #3 ALTERNATE CONNECTOR (NOT SHOWN)

TYPE #4 CONNECTOR

SMOOTH TAPERED SLEEVE DETAIL

TYPICAL PICTORIAL VIEW

TYPICAL DETAIL OF SAFETY BARS

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD
SAFETY END SECTION
(METAL)

FOR SIDE DRAIN PIPE OR FOR STORM DRAIN PIPE PARALLEL TO MARLINE

SCALE AS SHOWN

DESIGNED: [Signature]
CHECKED: [Signature]
DATE: SEPT., 1993

NUMBER
1122

SHEET 1 OF 3

ROUNDABOUT PLANS
for
OCONEE COUNTY GOVERNMENT

MARS HILL RD. AND MALCOM BRIDGE RD. & STAFFBUS ENTRANCE AND MALCOM BRIDGE RD.

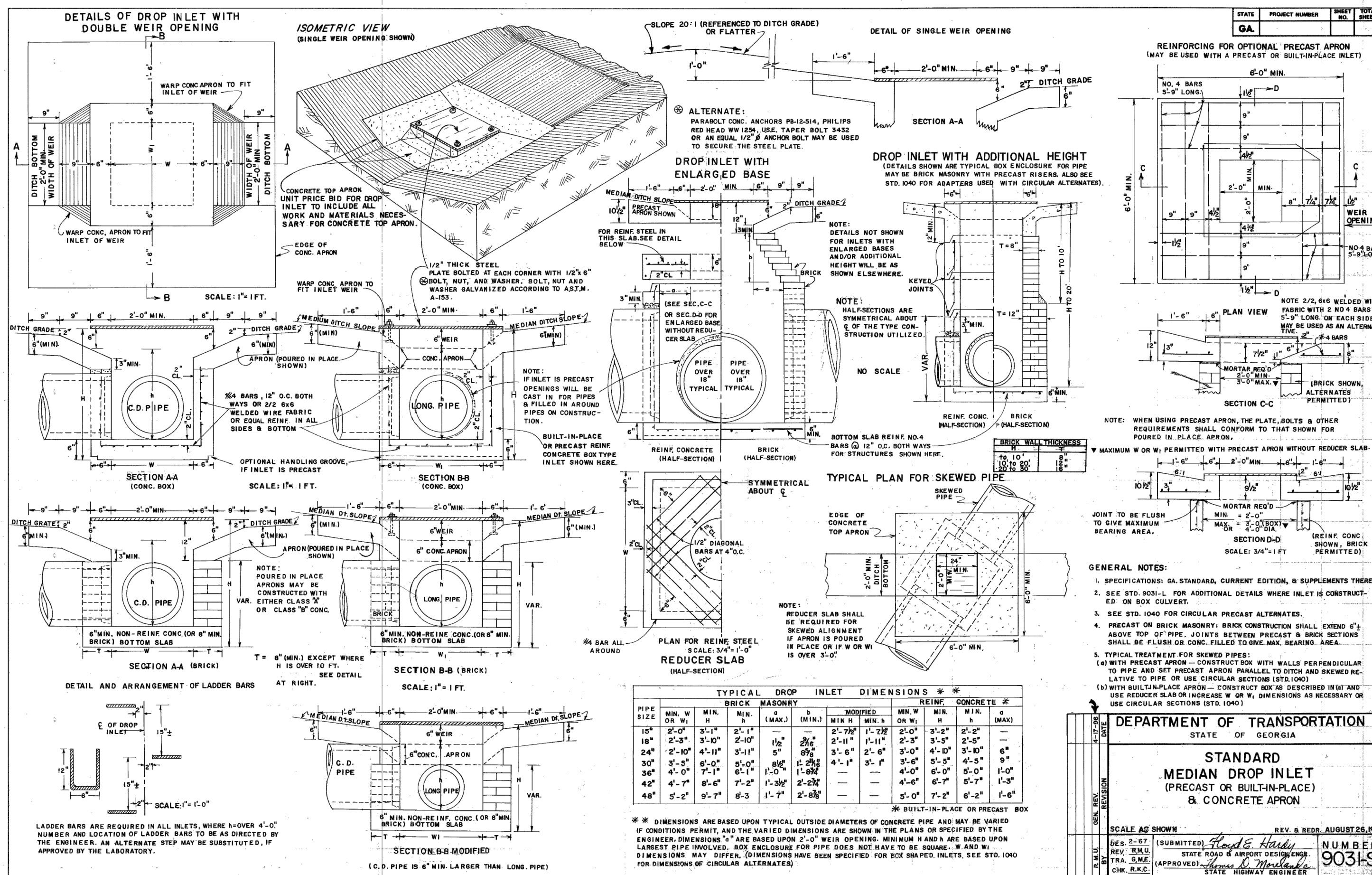
PROJECT NAME:
ROUNDABOUT PLANS

SHEET TITLE:
STANDARD DETAILS

SHEET NUMBER:
D-1.1

PROJECT NUMBER:
18010CG

DATE:
04/01/19

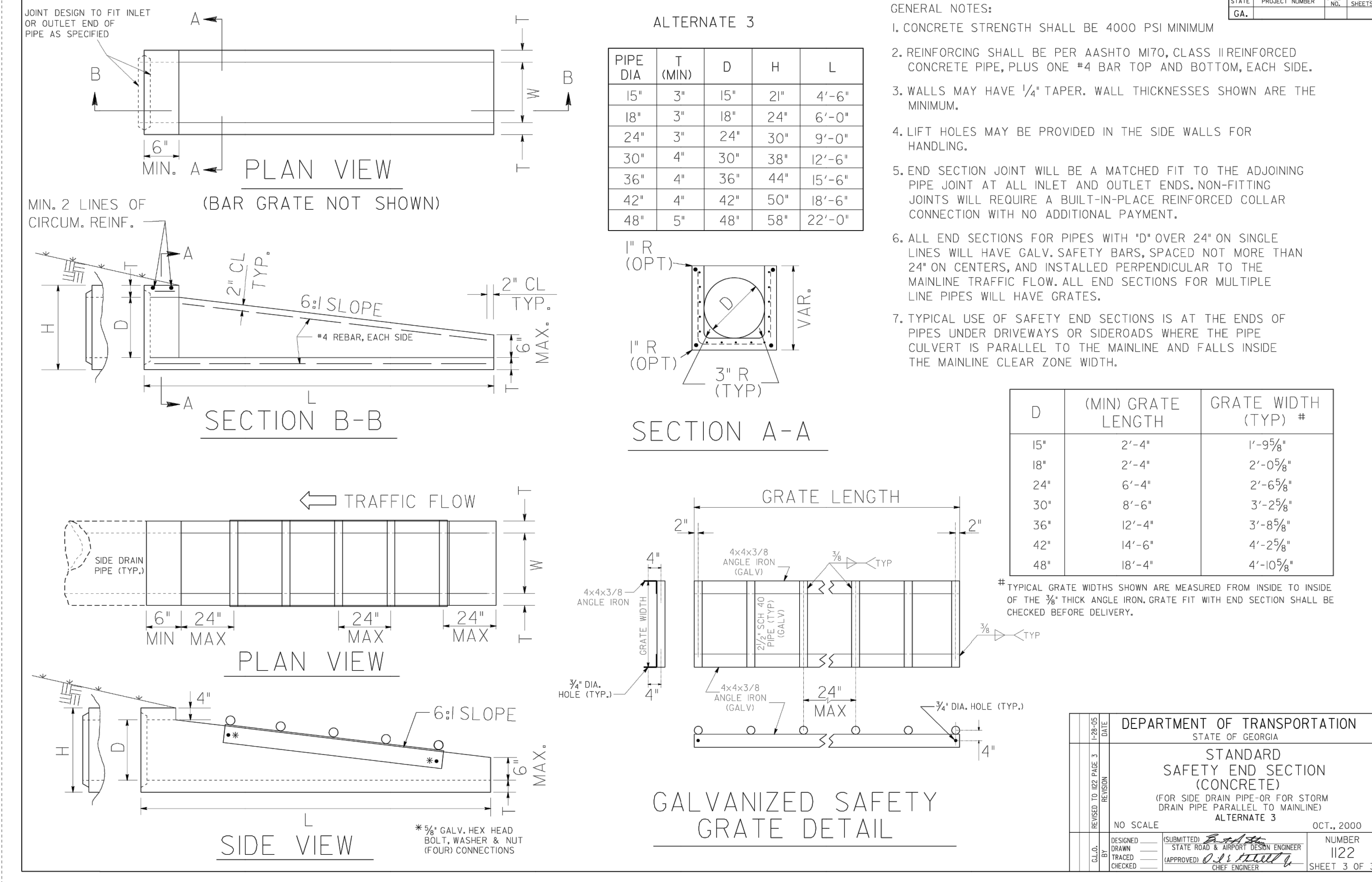


DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD
MEDIAN DROP INLET
(PRECAST OR BUILT-IN-PLACE)
& CONCRETE APRON

SCALE AS SHOWN REV. & REOR. AUGUST 2016

DESIGNED BY: *[Signature]* NUMBER: 9031S
CHECKED BY: *[Signature]* DATE: 08/24/16

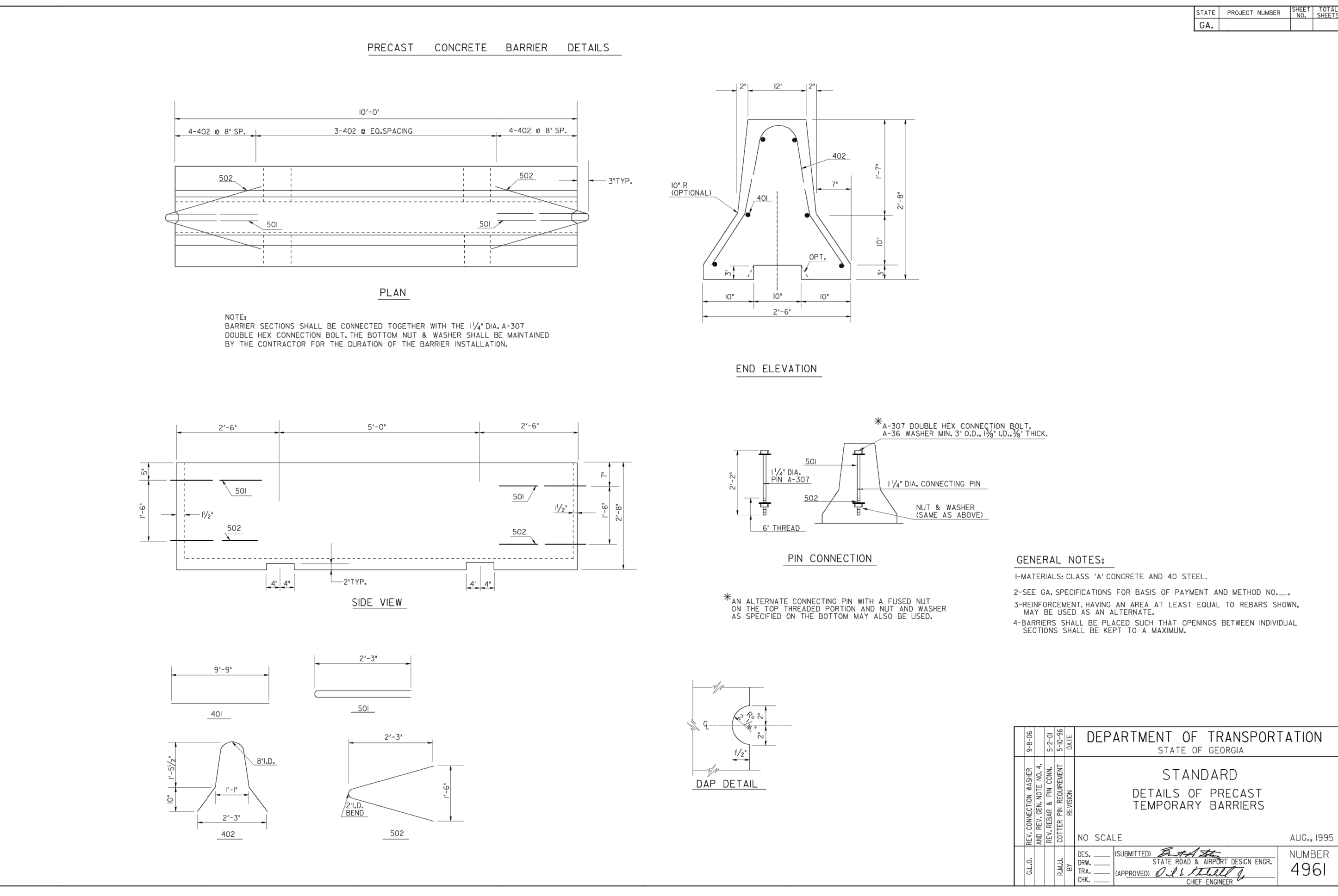


DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD
SAFETY END SECTION
(CONCRETE)
FOR SIDE DRAIN PIPE OR FOR STORM
DRAIN PIPE PARALLEL TO MAINLINE

ALTERNATE 3

NO SCALE DESIGNED BY: *[Signature]* NUMBER: 1122
CHECKED BY: *[Signature]* DATE: 08/24/16 SHEET 3 OF 3

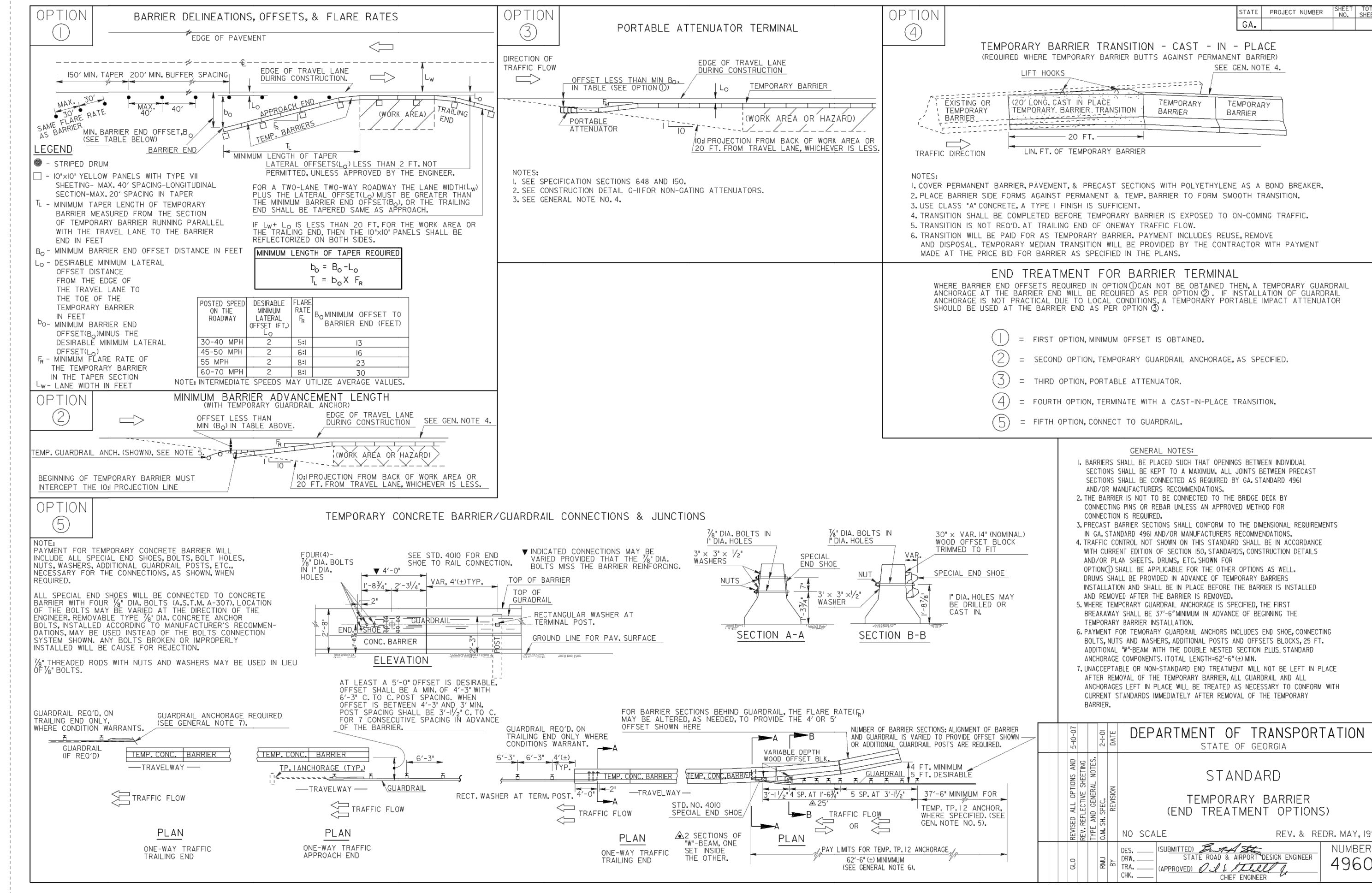


DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD
DETAILS OF PRECAST
TEMPORARY BARRIERS

NO SCALE REV. & REOR. AUG. 1995

DESIGNED BY: *[Signature]* NUMBER: 4961
CHECKED BY: *[Signature]* DATE: 08/24/16



DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD
TEMPORARY BARRIER
(END TREATMENT OPTIONS)

NO SCALE REV. & REOR. MAY, 1999

DESIGNED BY: *[Signature]* NUMBER: 4960
CHECKED BY: *[Signature]* DATE: 08/24/16

REVISION BLOCK

NO.	DATE	REVISION
A	07/19/2019	INITIAL REVIEW
B	07/19/2019	90% SUBMITTAL
C	04/01/2019	ISSUE FOR REVIEW
D	04/12/2019	CONTRACTOR BID

STATE PROJECT NUMBER: 1122 SHEET NO. 3 OF 3

REGISTERED PROFESSIONAL ENGINEER
A. CAMPBELL

04/12/19

CARTER ENGINEERING CONSULTANTS

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3631 Mars Hill Road, Suite 2000
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P: 770.725.1200
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www.carterengineering.net

ROUNDABOUT PLANS for OCONEE COUNTY GOVERNMENT

MARS HILL RD. AND MALCOM BRIDGE RD. & STAFFBUS ENTRANCE AND MALCOM BRIDGE RD.

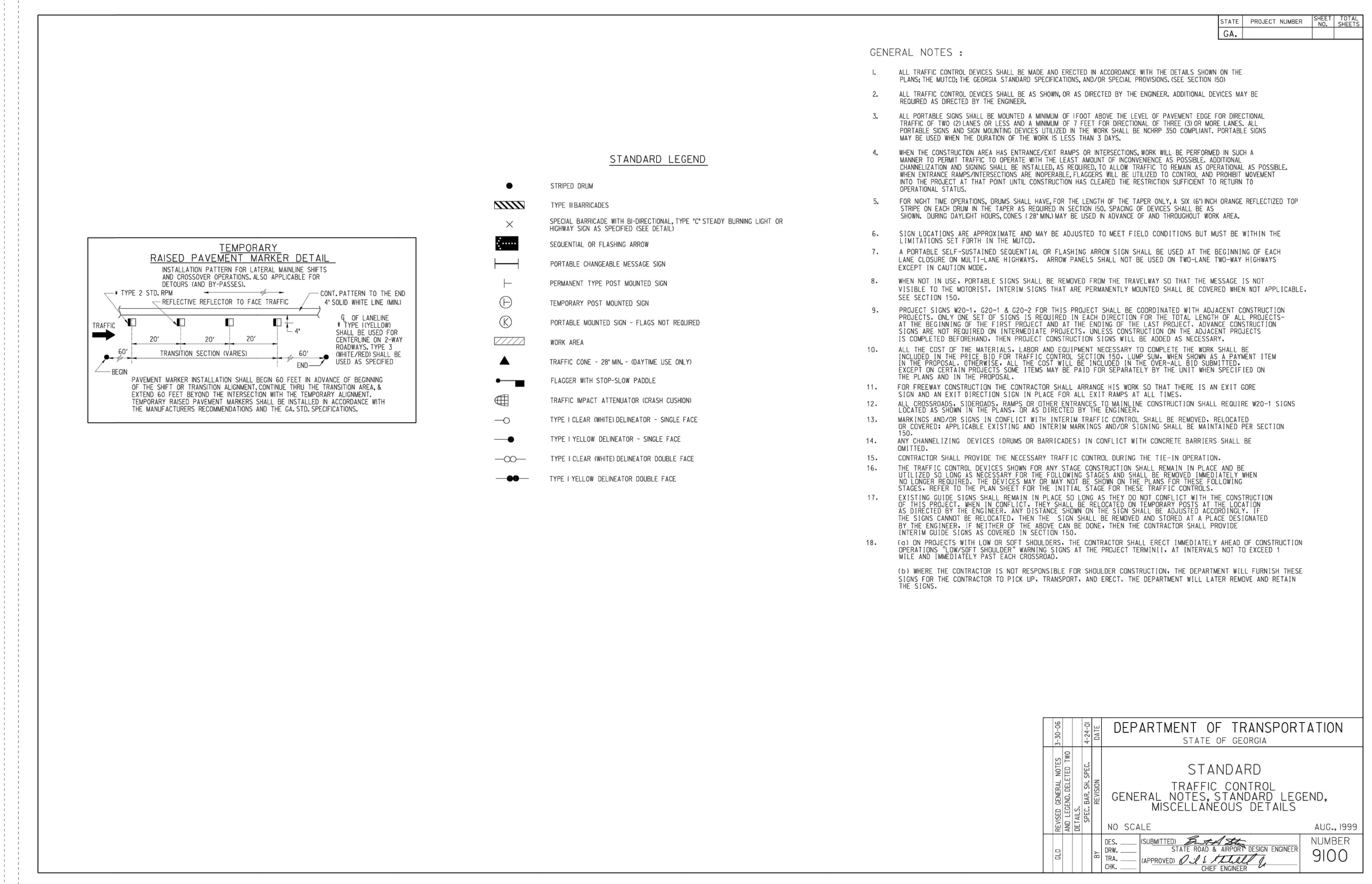
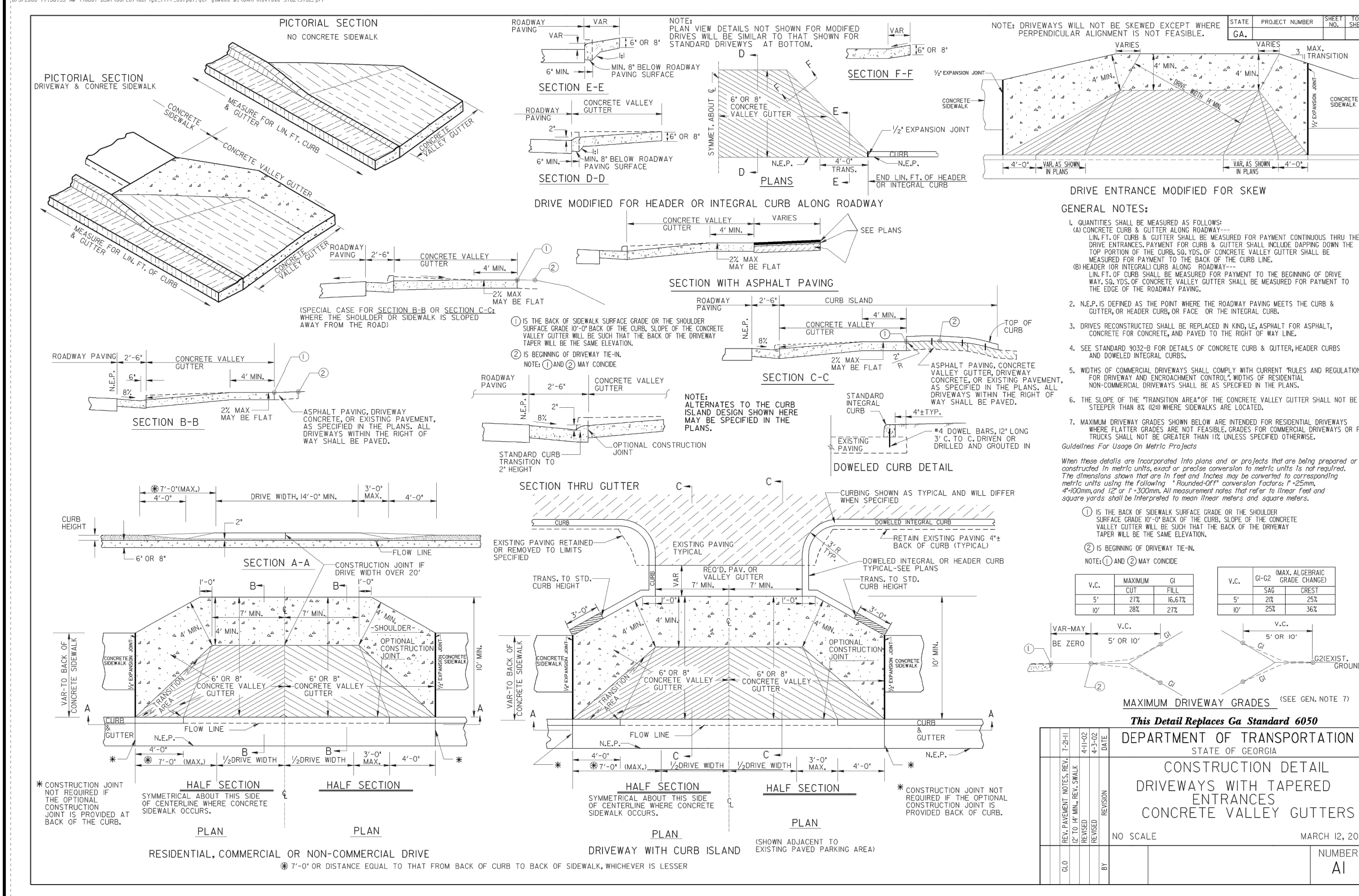
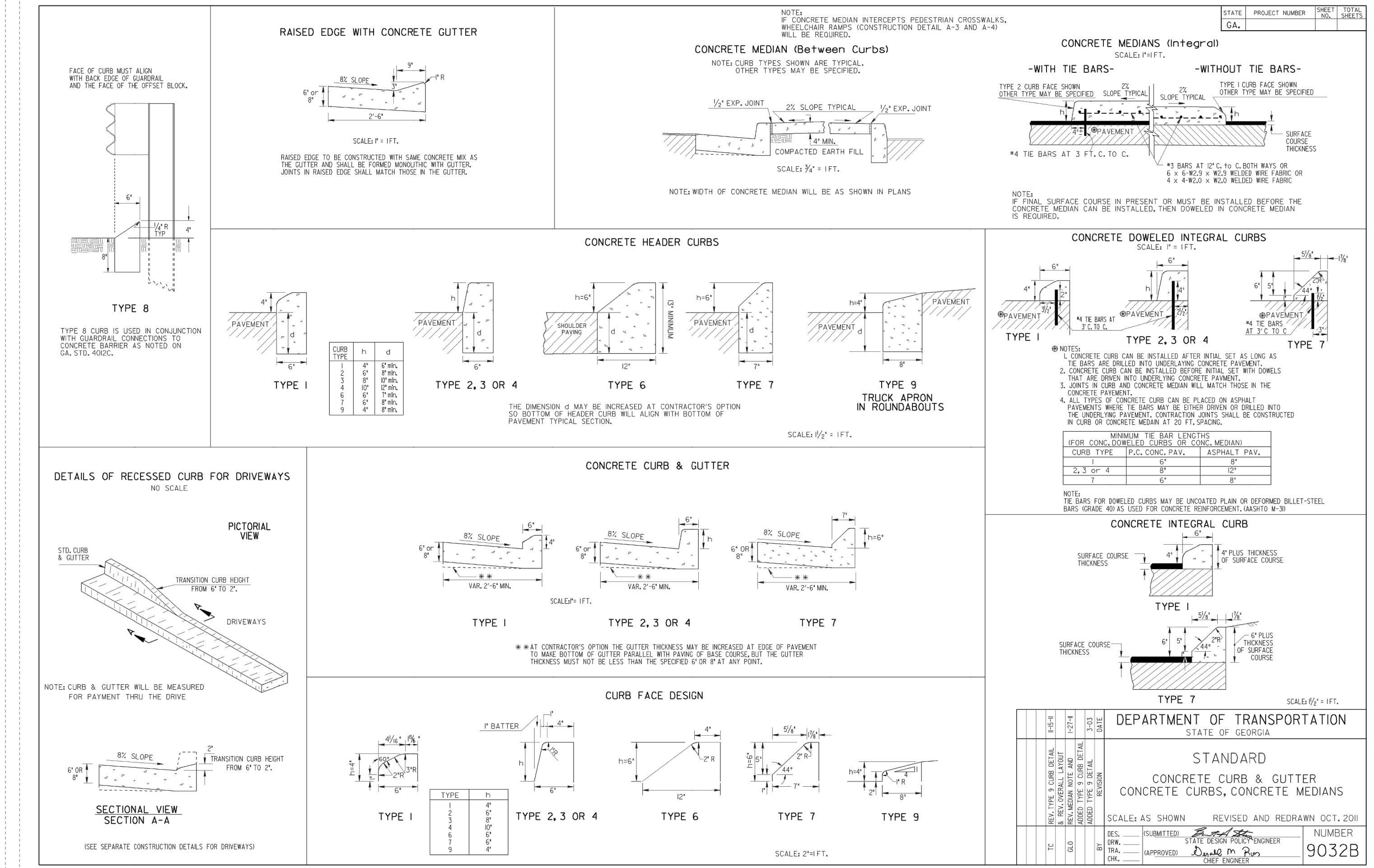
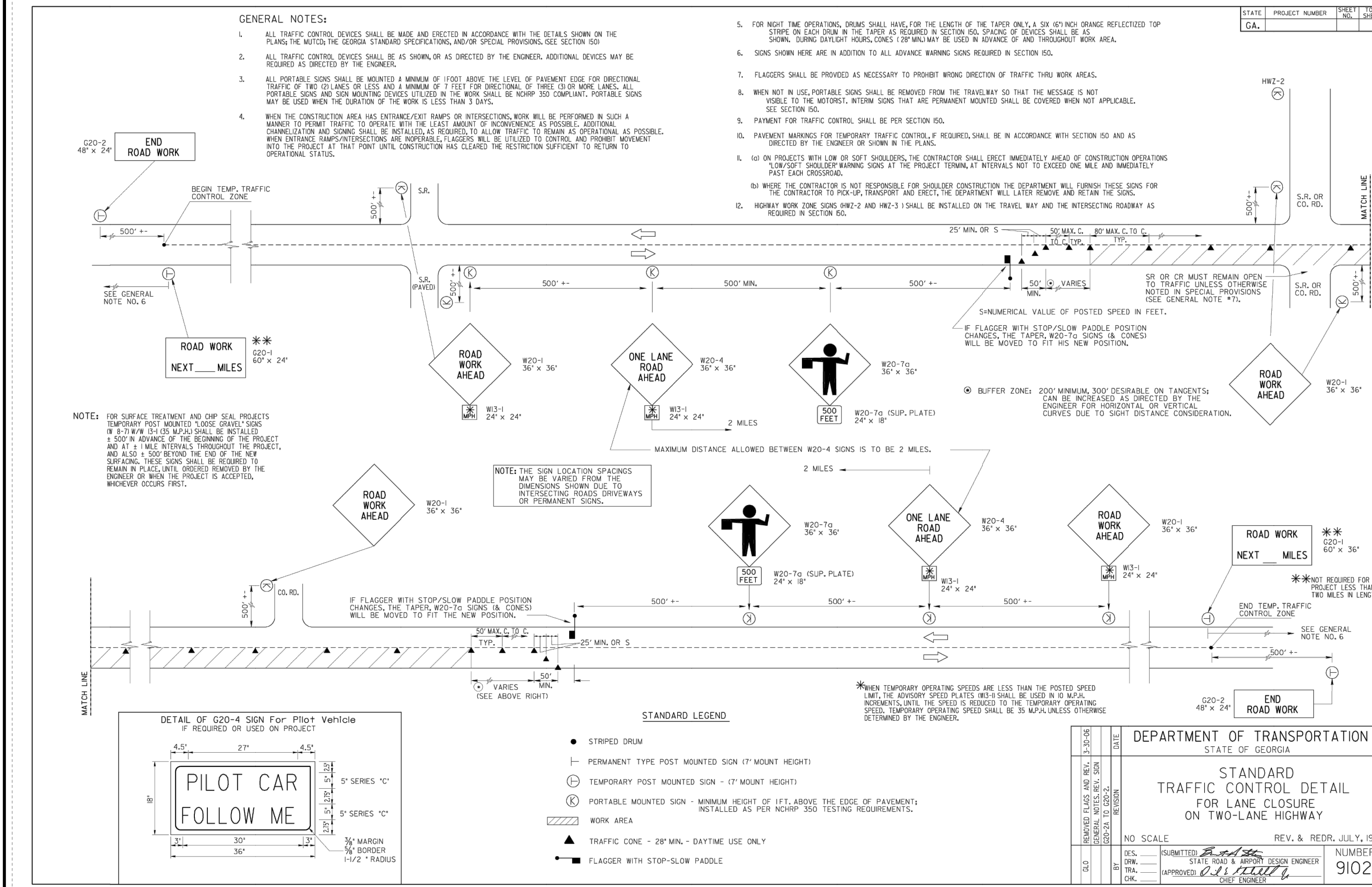
PROJECT NAME: ROUNDABOUT PLANS

SHEET TITLE: STANDARD DETAILS

SHEET NUMBER: D-1.2

PROJECT NUMBER: 18010CG

DATE: 04/01/19



REVISION BLOCK

REV #	DATE	REVISION
A	03/19/2019	INITIAL REVIEW
B	03/19/2019	90% SUBMITTAL
C	04/01/2019	ISSUE FOR REVIEW
D	04/12/2019	CONTRACTOR BID

DATE: 04/12/19

REGISTERED PROFESSIONAL ENGINEER
A. CAMPBELL

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ROUNDABOUT PLANS for OCONEE COUNTY GOVERNMENT
MARS HILL RD. AND MALCOM BRIDGE RD. & STAFFBUS ENTRANCE AND MALCOM BRIDGE RD.

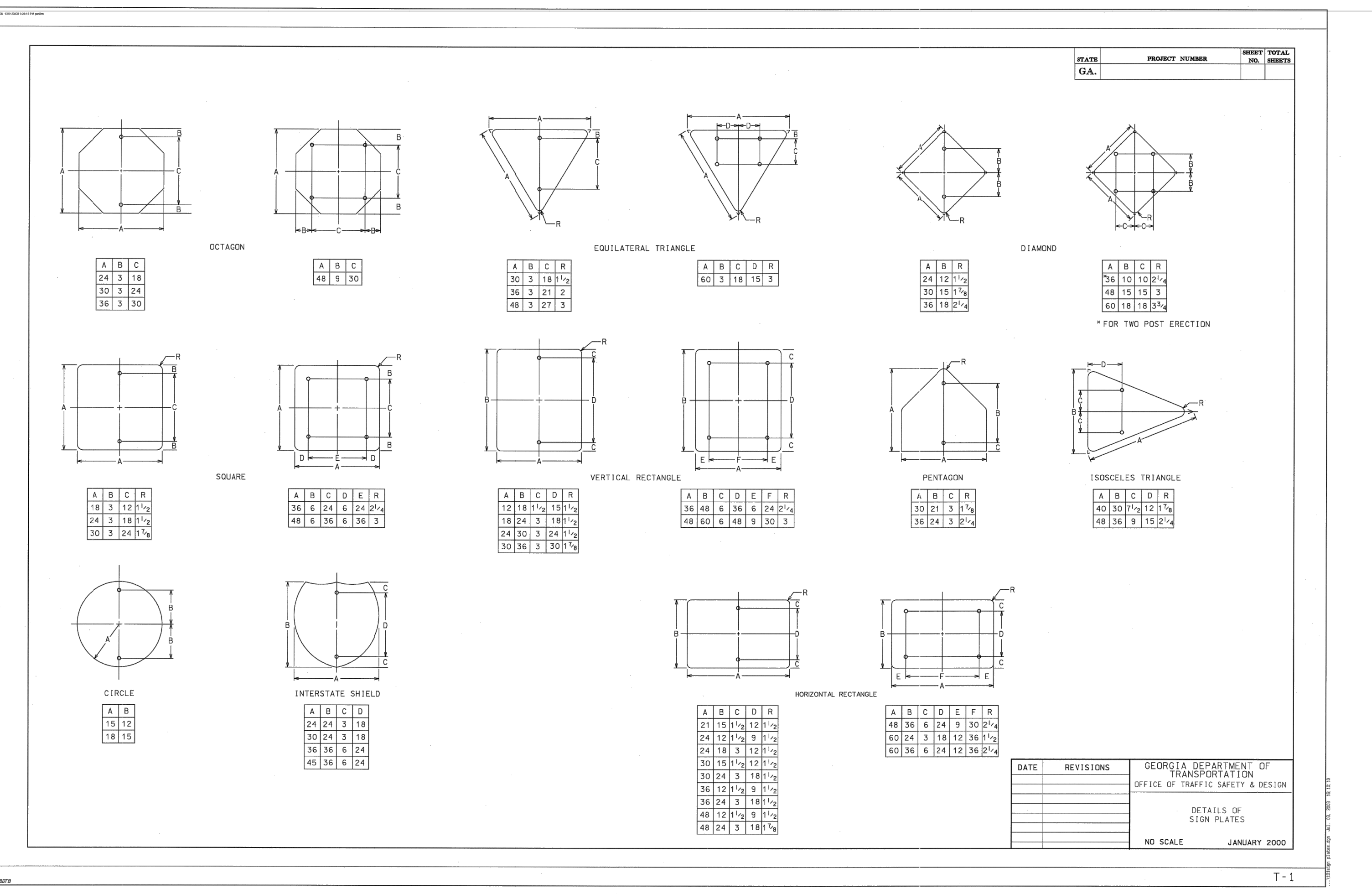
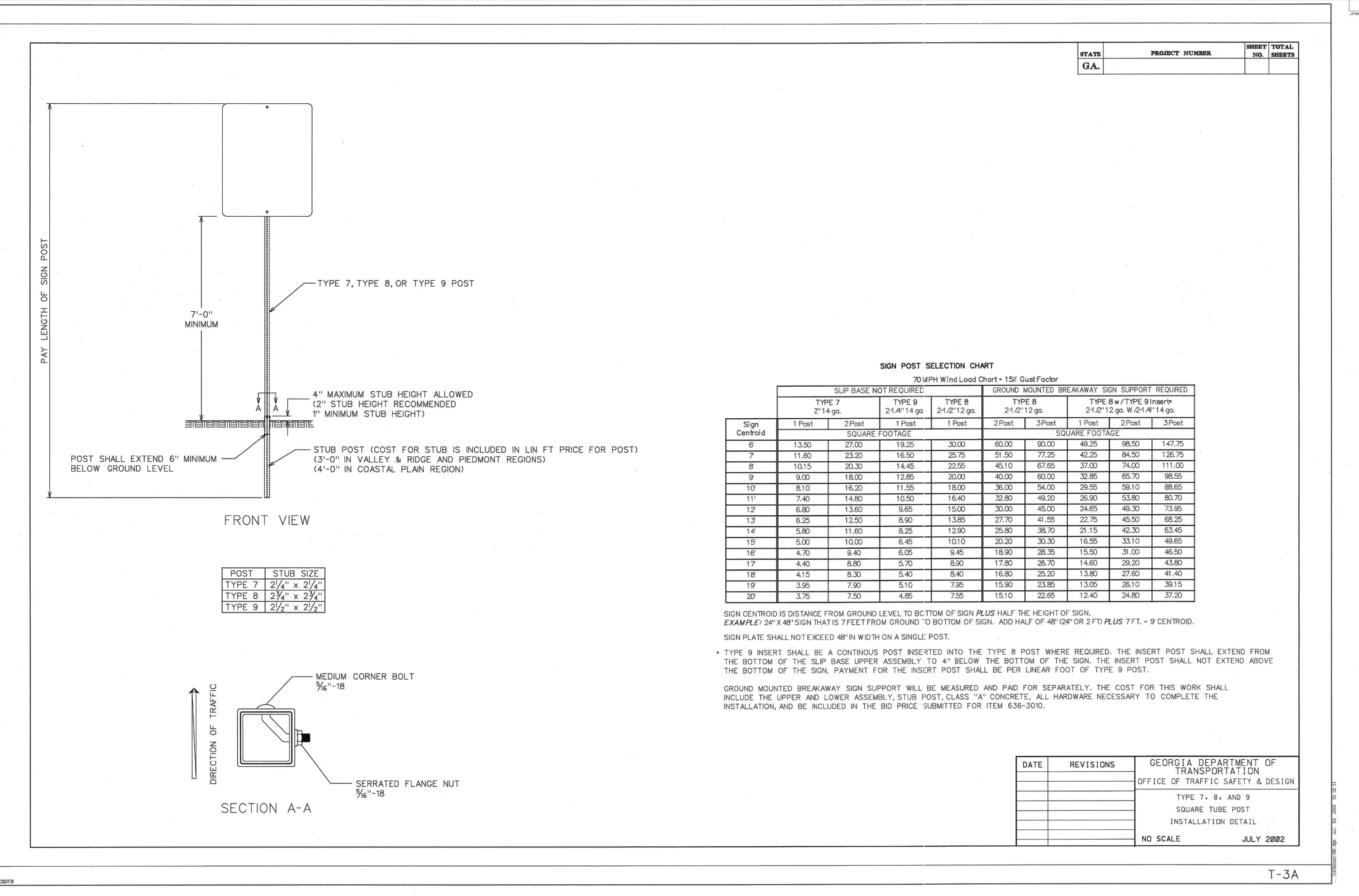
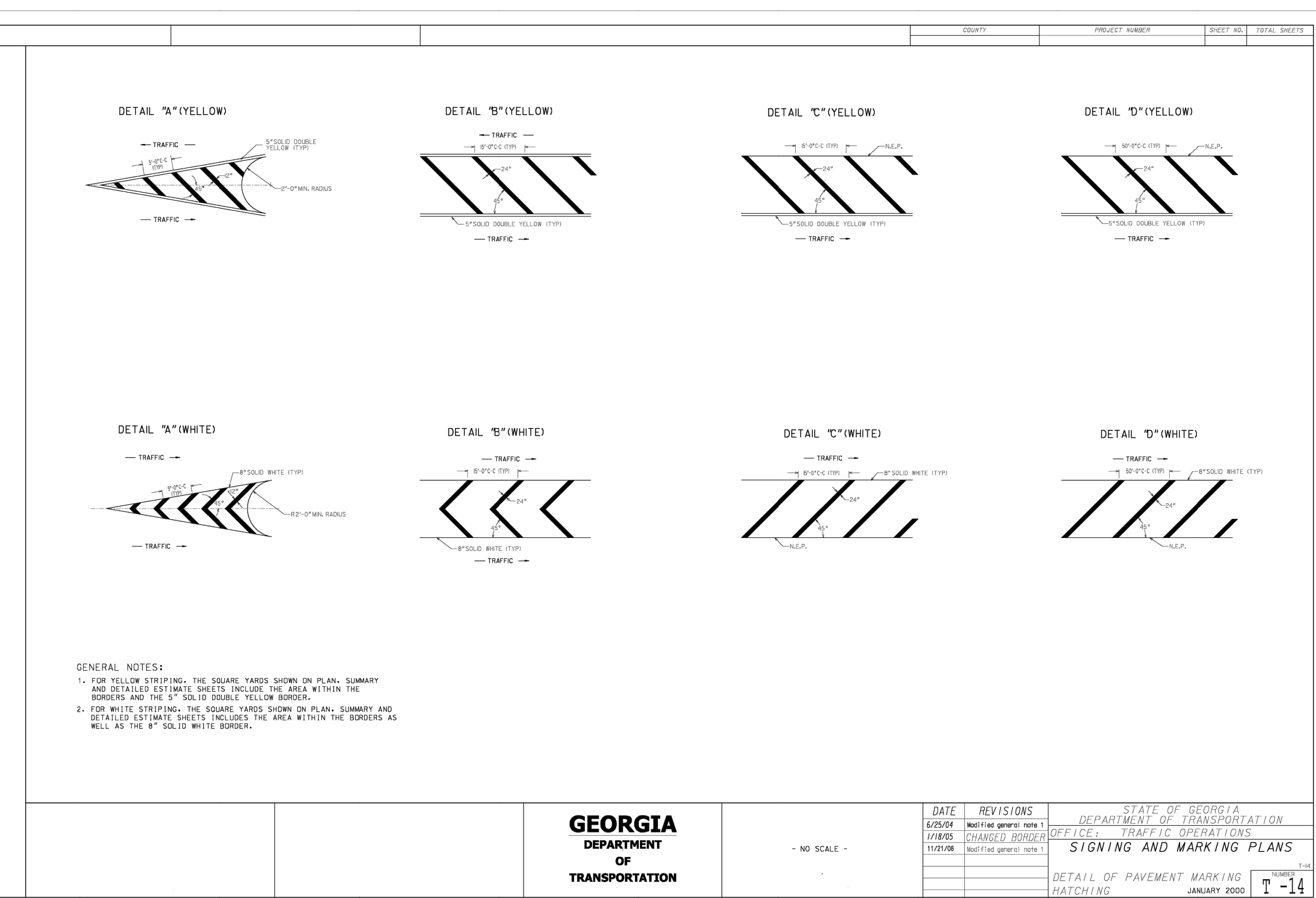
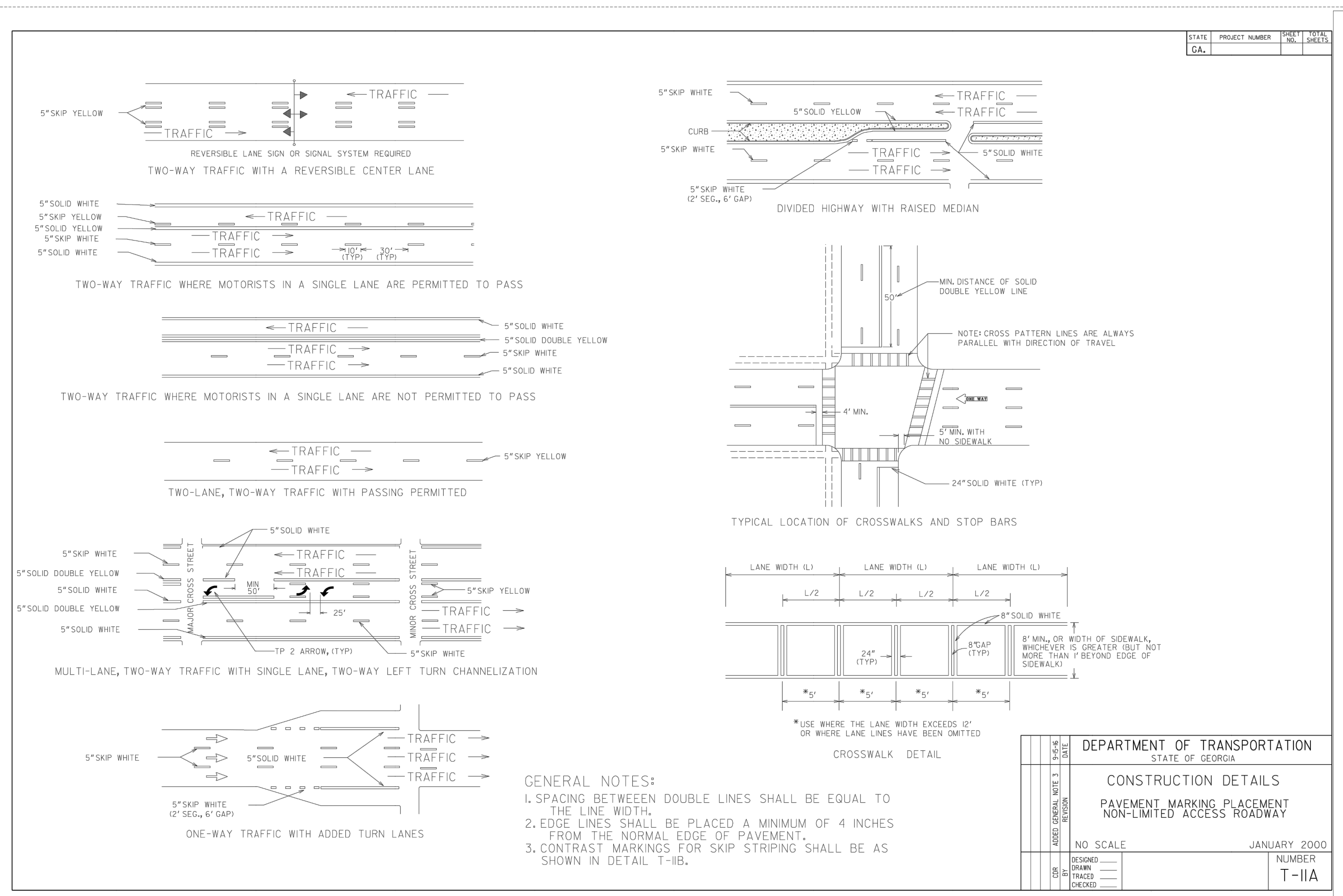
PROJECT NAME: ROUNDABOUT PLANS

SHEET TITLE: STANDARD DETAILS

SHEET NUMBER: D-1.3

PROJECT NUMBER: 18010CG

DATE: 04/01/19



REVISION BLOCK

REV. #	DATE	REVISION
A	02/19/2019	INITIAL REVIEW
B	03/19/2019	90% SUBMITTAL
C	04/01/2019	ISSUE FOR REVIEW
D	04/12/2019	CONTRACTOR BID

04/12/19

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PROJECT NAME:
ROUNDABOUT PLANS

SHEET TITLE:
STANDARD DETAILS

SHEET NUMBER:
D-1.5

PROJECT NUMBER:
180010CG

DATE:
04/01/19

OCONEE COUNTY GOVERNMENT
 MARS HILL RD. AND MALCOM BRIDGE RD. & STAFFBUS ENTRANCE AND MALCOM BRIDGE RD.

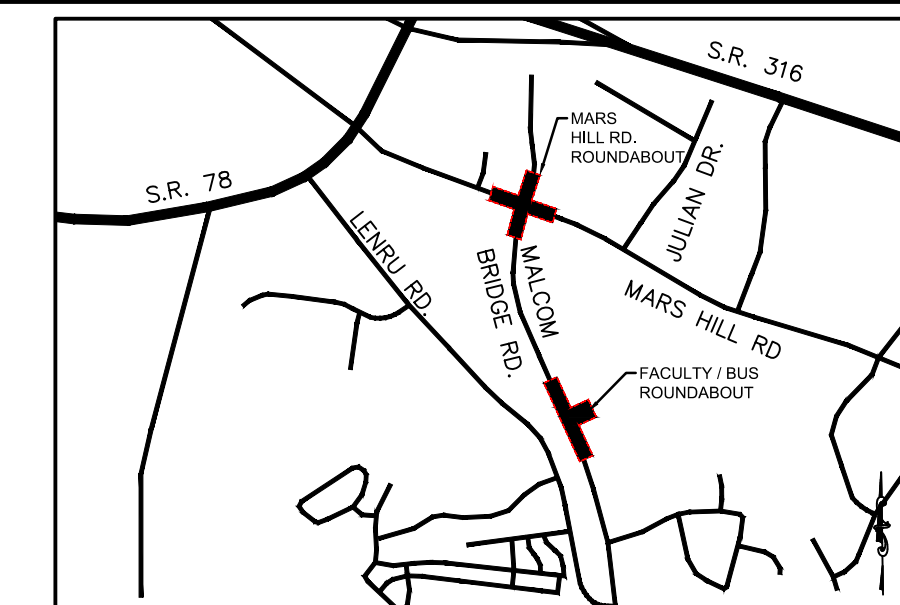
PHASE I SEDIMENT STORAGE CALCULATIONS:

Total Acreage = 1.72 Acres
 Less Milled and Overlaid Asphalt = 0.39 Acres
 Disturbed Area = 1.34 Acres

Required Sediment Storage = 1.34 ac x 67 cy/ac = 89.8 cy

Sediment Storage Provided by the following BMPs:

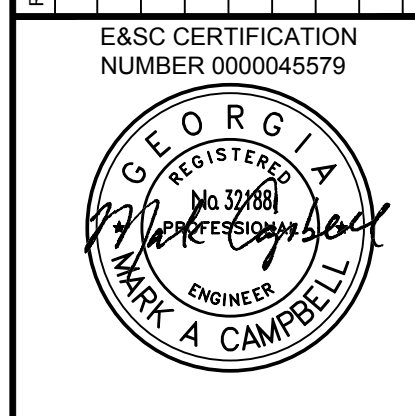
- Silt Fencing (Sd1):
 1,562 L.F. X 2.16/27 = 125 c.y.



LOCATION MAP
SCALE: N.T.S.

- EROSION CONTROL NOTES:**
- DEVELOPER/OWNER: OCONEE COUNTY GOVERNMENT, 23 N. MAIN STREET, WATKINSVILLE, GA. 30677, (706) 769-2939
 - NAME AND PHONE NUMBER OF THE 24-HOUR CONTACT PERSON FOR EROSION, SEDIMENTATION AND POLLUTION CONTROLS IS: JODY WOODALL, PE (706) 769-2939
 - TOTAL PROJECT AREA = 1.732 ACRES
 - TOTAL DISTURBED AREA = 1.343 ACRES
 - THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO LAND DISTURBING ACTIVITIES.
 - EROSION AND SEDIMENTATION CONTROL MEASURES AND PRACTICES SHALL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION AND SEDIMENT CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.
 - SEDIMENT STORAGE MAINTENANCE INDICATORS MUST BE INSTALLED IN SEDIMENT STORAGE STRUCTURES, INDICATING THE 1/2 FULL VOLUME.
 - MAINTENANCE OF ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES AND PRACTICES, WHETHER TEMPORARY OR PERMANENT, SHALL AT ALL TIMES BE THE RESPONSIBILITY OF THE PROPERTY OWNER.
 - ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.
 - ALL FILL SLOPES SHALL HAVE SILT FENCE PLACED AT THE SLOPE'S TOE.
 - CONCENTRATED FLOW AREAS AND ALL SLOPES STEEPER THAN 2.5:1 WITH A HEIGHT OF TEN FEET OR GREATER SHALL BE STABILIZED WITH APPROPRIATE EROSION CONTROL MATTING OR BLANKET.
 - THE PROFESSIONAL WHO SEALS THIS PLAN CERTIFIES UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY THE PROFESSIONAL OR THE PROFESSIONAL'S AUTHORIZED AGENT, UNDER THE PROFESSIONAL'S DIRECT SUPERVISION.
 - UPON NOTIFICATION AND AUTHORIZATION OF THE OWNER, THE DESIGN PROFESSIONAL WHO PREPARED THE ES&PC PLAN IS RESPONSIBLE FOR INSPECTING THE INSTALLATION OF THE BMP'S WITHIN 7 DAYS AFTER INITIAL CONSTRUCTION ACTIVITIES BEGINS.
 - THE RECEIVING WATER(S) IS UNNAMED TRIBUTARY TO BARBER CREEK
 - AMENDMENTS/REVISIONS TO THE ES&PC PLAN WHICH HAVE SIGNIFICANT EFFECT ON BMP'S WITH HYDRAULIC COMPONENT MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL
 - MAINTENANCE OF ALL EROSION CONTROL MEASURES, WHETHER TEMPORARY OR PERMANENT, SHALL AT ALL TIME BE THE RESPONSIBILITY OF THE OWNER.

REVISION BLOCK	REV. #	DATE	REVISION
A	1	01/19/2019	INITIAL REVIEW
B	2	03/19/2019	90% SUBMITTAL
C	3	04/01/2019	ISSUE FOR REVIEW
D	4	04/12/2019	CONTRACTOR BID



04/12/19



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 Watkinsville, GA 30677
 P: 770.725.1200
 F: 770.725.1204
 www.carterengineering.net

ROUNDABOUT PLANS
for
OCONEE COUNTY GOVERNMENT
STAFF AND BUS ENTRANCE AND MALCOLM BRIDGE RD.

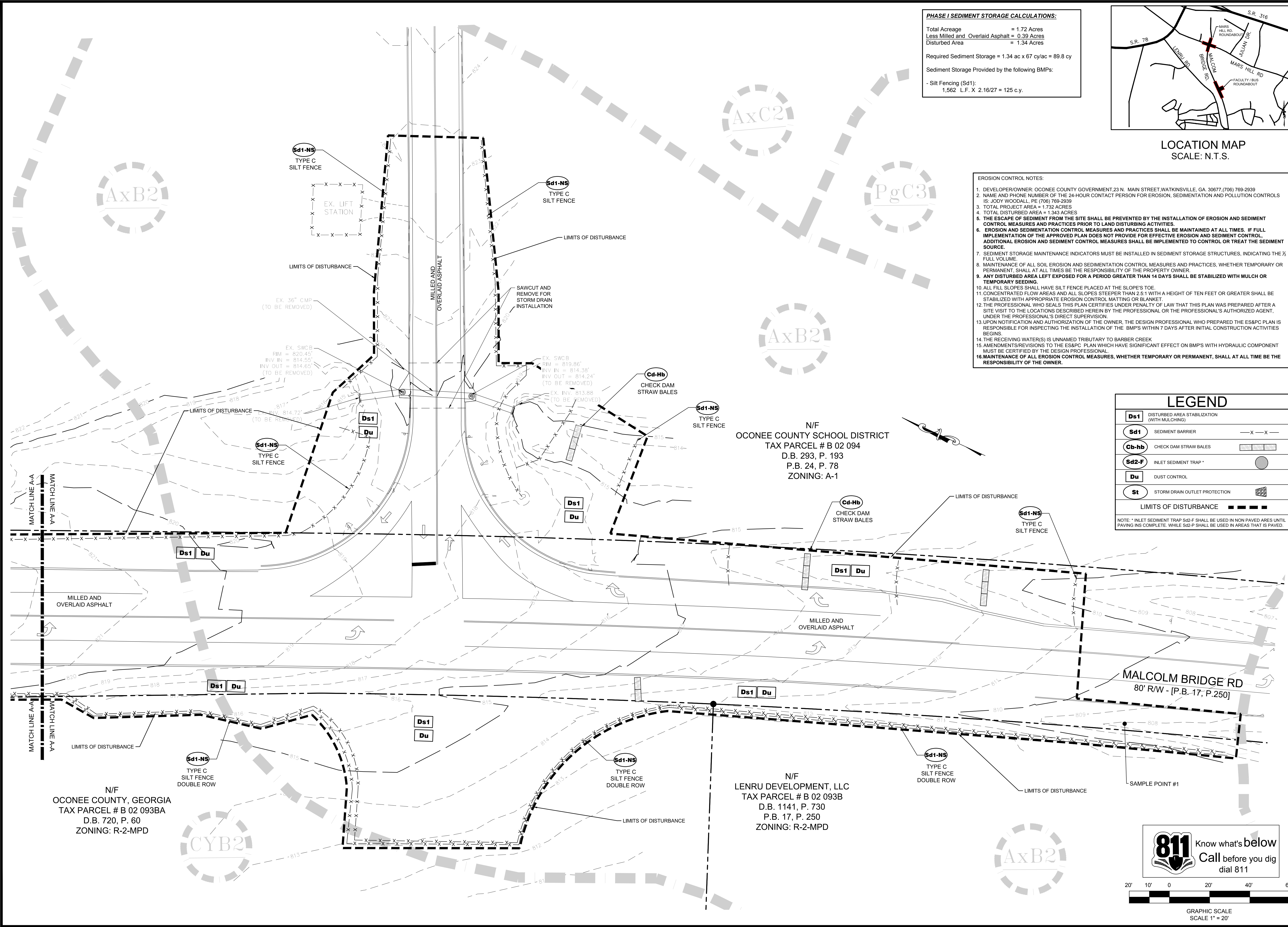
PROJECT NAME:
ROUNDABOUT PLANS

SHEET TITLE:
PHASE I
ES&PC PLAN

SHEET NUMBER:
E-1.2

PROJECT NUMBER:
180010CG

DATE:
04/01/19



LEGEND

Ds1	DISTURBED AREA STABILIZATION (WITH MULCHING)	---
Sd1	SEDIMENT BARRIER	-x-x-
Cd-hb	CHECK DAM STRAW BALES	
Sd2-F	INLET SEDIMENT TRAP*	●
Du	DUST CONTROL	□
St	STORM DRAIN OUTLET PROTECTION	■
LIMITS OF DISTURBANCE - - - - -		

NOTE: * INLET SEDIMENT TRAP Sd2-F SHALL BE USED IN NON PAVED AREAS UNTIL PAVING IS COMPLETE. WHILE Sd2-P SHALL BE USED IN AREAS THAT IS PAVED.

811 Know what's below
Call before you dig dial 811

GRAPHIC SCALE
SCALE 1" = 20'

AxB2

AxC2

PgC3

AxB2

CYB2

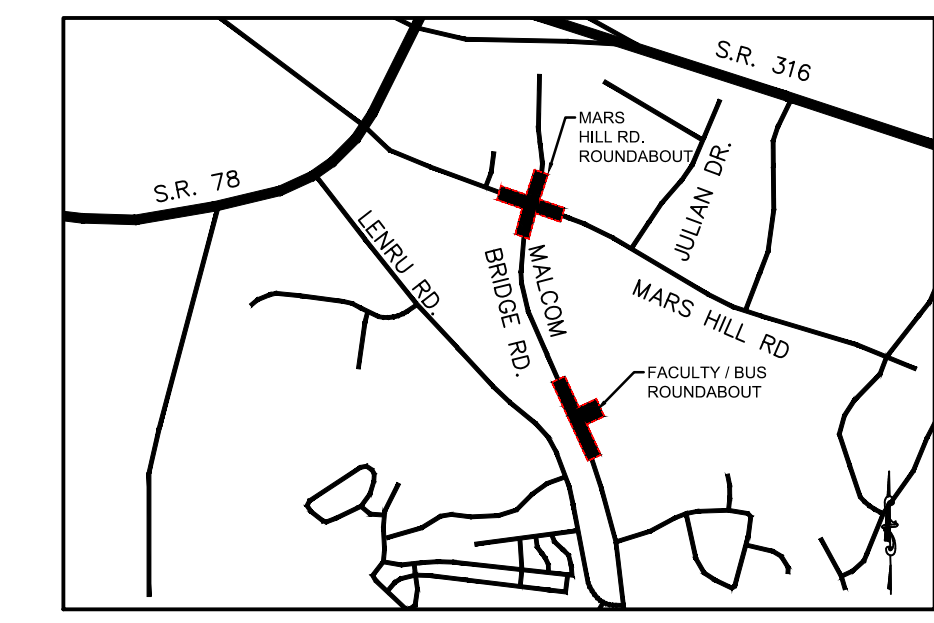
AxB2

N/F
OCONEE COUNTY, GEORGIA
TAX PARCEL # B 02 093BA
D.B. 720, P. 60
ZONING: R-2-MPD

N/F
LENRU DEVELOPMENT, LLC
TAX PARCEL # B 02 093B
D.B. 1141, P. 730
P.B. 17, P. 250
ZONING: R-2-MPD

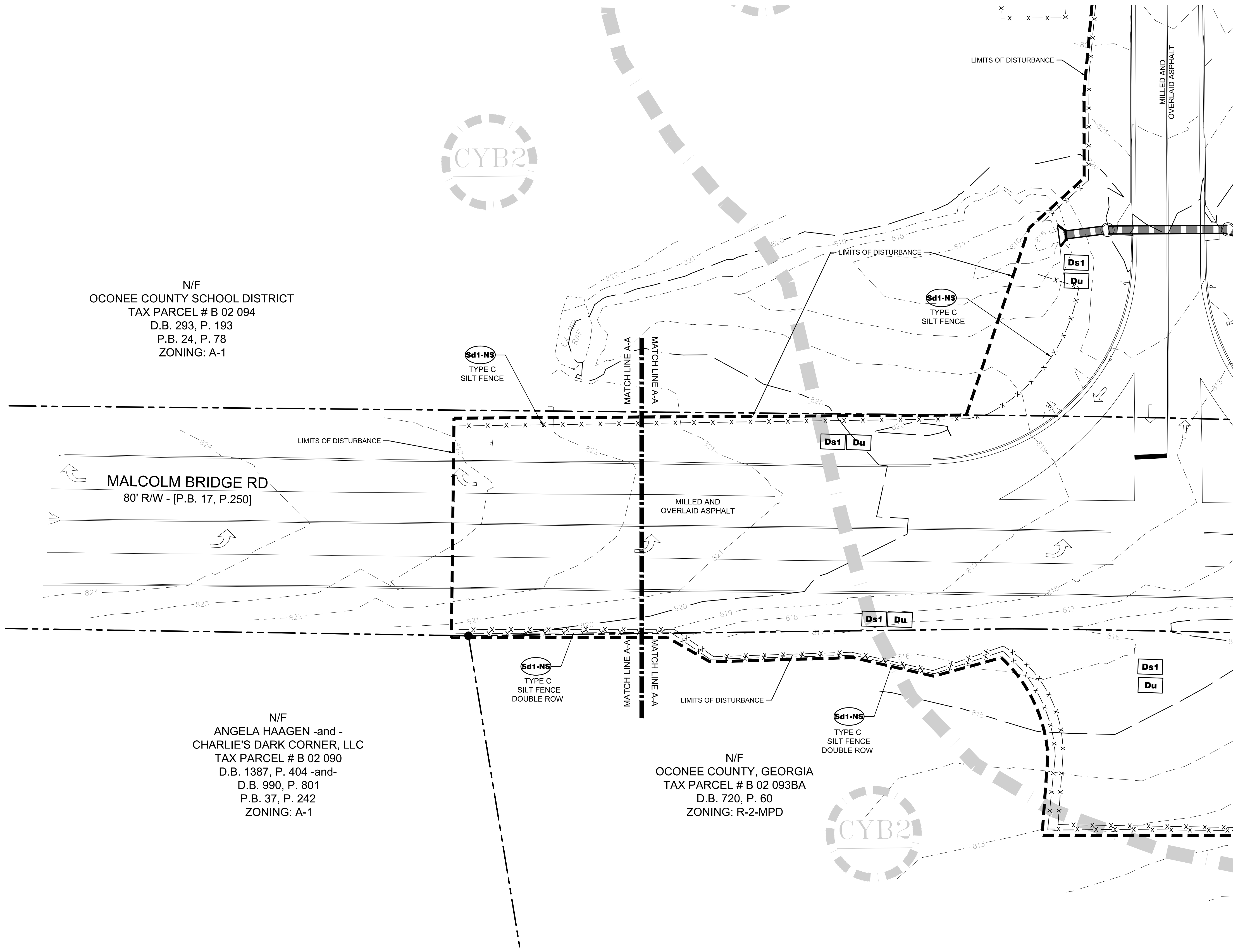
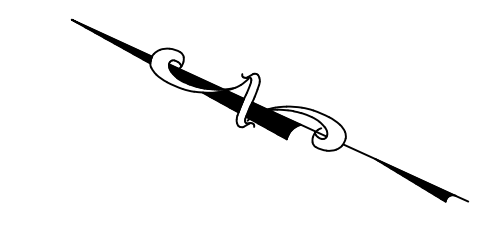
N/F
OCONEE COUNTY SCHOOL DISTRICT
TAX PARCEL # B 02 094
D.B. 293, P. 193
P.B. 24, P. 78
ZONING: A-1

TOTAL AND DISTURBED ACREAGE	
Total Acreage	= 1.72 Acres
Less Milled and Overlaid Asphalt	= 0.39 Acres
Disturbed Area	= 1.34 Acres



- EROSION CONTROL NOTES:**
1. DEVELOPER/OWNER: OCONEE COUNTY GOVERNMENT 23 N. MAIN STREET, WATKINSVILLE, GA. 30677 (706) 769-2939
 2. NAME AND PHONE NUMBER OF THE 24-HOUR CONTACT PERSON FOR EROSION, SEDIMENTATION AND POLLUTION CONTROLS IS: JODY WOODALL, PE (706) 769-2939
 3. TOTAL PROJECT AREA = 1.732 ACRES
 4. TOTAL DISTURBED AREA = 1.343 ACRES
 5. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO LAND DISTURBING ACTIVITIES.
 6. EROSION AND SEDIMENTATION CONTROL MEASURES AND PRACTICES SHALL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION AND SEDIMENT CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.
 7. SEDIMENT STORAGE MAINTENANCE INDICATORS MUST BE INSTALLED IN SEDIMENT STORAGE STRUCTURES, INDICATING THE FULL VOLUME.
 8. MAINTENANCE OF ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES AND PRACTICES, WHETHER TEMPORARY OR PERMANENT, SHALL AT ALL TIMES BE THE RESPONSIBILITY OF THE PROPERTY OWNER.
 9. ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.
 10. ALL FILL SLOPES SHALL HAVE SILT FENCE PLACED AT THE SLOPE'S TOE.
 11. CONCENTRATED FLOW AREAS AND ALL SLOPES STEEPER THAN 2.5:1 WITH A HEIGHT OF TEN FEET OR GREATER SHALL BE STABILIZED WITH APPROPRIATE EROSION CONTROL MATTING OR BLANKET.
 12. THE PROFESSIONAL WHO SEALS THIS PLAN CERTIFIES UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY THE PROFESSIONAL OR THE PROFESSIONAL'S AUTHORIZED AGENT, UNDER THE PROFESSIONAL'S DIRECT SUPERVISION.
 13. UPON NOTIFICATION AND AUTHORIZATION OF THE OWNER, THE DESIGN PROFESSIONAL WHO PREPARED THE ES&PC PLAN IS RESPONSIBLE FOR INSPECTING THE INSTALLATION OF THE BMP'S WITHIN 7 DAYS AFTER INITIAL CONSTRUCTION ACTIVITIES BEGINS.
 14. THE RECEIVING WATER(S) IS UNNAMED TRIBUTARY TO BARBER CREEK.
 15. AMENDMENTS/REVISIONS TO THE ES&PC PLAN WHICH HAVE SIGNIFICANT EFFECT ON BMP'S WITH HYDRAULIC COMPONENT MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL.
 16. MAINTENANCE OF ALL EROSION CONTROL MEASURES, WHETHER TEMPORARY OR PERMANENT, SHALL AT ALL TIME BE THE RESPONSIBILITY OF THE OWNER.

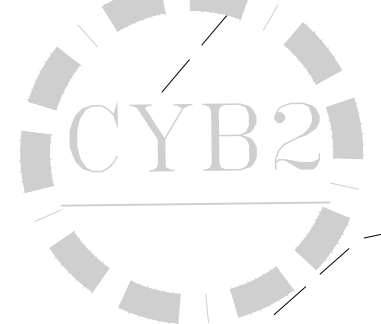
LEGEND	
Ds1	DISTURBED AREA STABILIZATION (WITH MULCHING)
Sd1	SEDIMENT BARRIER
Cb-hb	CHECK DAM STRAW BALES
Sd2-F	INLET SEDIMENT TRAP
Du	DUST CONTROL
St	STORM DRAIN OUTLET PROTECTION
LIMITS OF DISTURBANCE	
NOTE: * INLET SEDIMENT TRAP Sd2-F SHALL BE USED IN NON PAVED AREAS UNTIL PAVING IS COMPLETE. WHILE Sd2-P SHALL BE USED IN AREAS THAT IS PAVED.	



N/F
 OCONEE COUNTY SCHOOL DISTRICT
 TAX PARCEL # B 02 094
 D.B. 293, P. 193
 P.B. 24, P. 78
 ZONING: A-1

N/F
 ANGELA HAAGEN -and -
 CHARLIE'S DARK CORNER, LLC
 TAX PARCEL # B 02 090
 D.B. 1387, P. 404 -and-
 D.B. 990, P. 801
 P.B. 37, P. 242
 ZONING: A-1

N/F
 OCONEE COUNTY, GEORGIA
 TAX PARCEL # B 02 093BA
 D.B. 720, P. 60
 ZONING: R-2-MPD



REVISION BLOCK:	REV. #	DATE	REVISION
	A	07/19/2019	INITIAL REVIEW
	B	03/19/2019	90% SUBMITTAL
	C	04/01/2019	ISSUE FOR REVIEW
	D	04/12/2019	CONTRACTOR BID

E&SC CERTIFICATION
 NUMBER 000045579

04/12/19

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 Watkinsville, GA 30677
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 F: 770.725.1204
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ROUNDABOUT PLANS
 for
 OCONEE COUNTY GOVERNMENT
 STAFF AND BUS ENTRANCE AND MALCOLM BRIDGE RD.

PROJECT NAME:
ROUNDABOUT PLANS

SHEET TITLE:
**PHASE I
 ES&PC PLAN**

SHEET NUMBER:
E-1.2.1

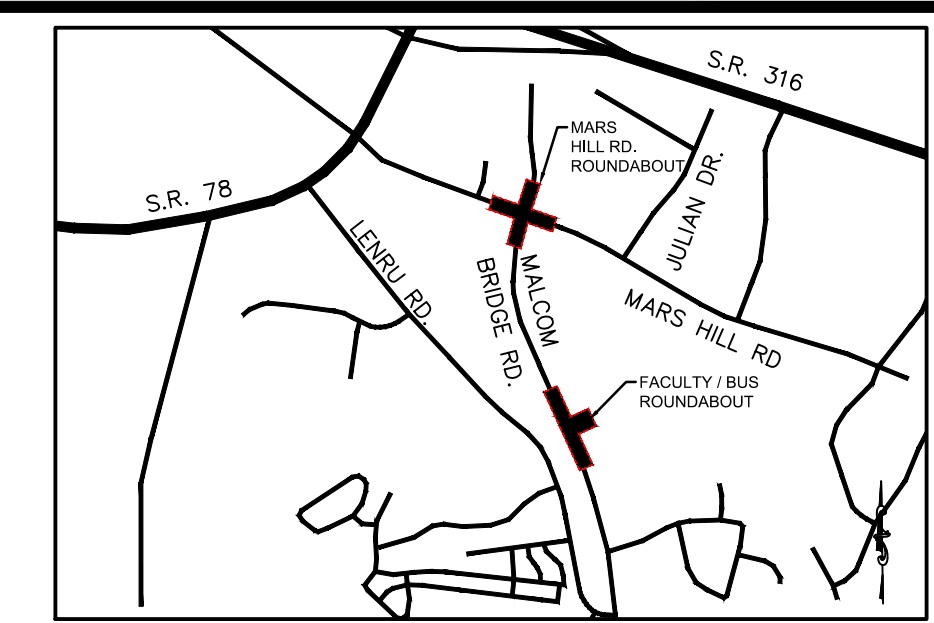
PROJECT NUMBER:
180010CG

DATE:
04/01/19

811 Know what's below
 Call before you dig
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GRAPHIC SCALE
 SCALE 1" = 20'

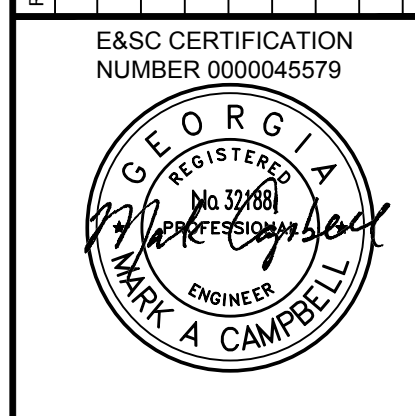
TOTAL AND DISTURBED ACREAGE	
Total Acreage	= 1.72 Acres
Less Milled and Overlayed Asphalt	= 0.39 Acres
Disturbed Area	= 1.34 Acres



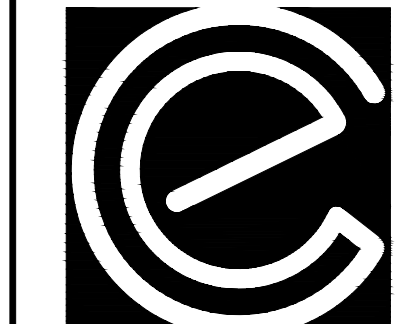
LOCATION MAP
SCALE: N.T.S.

- EROSION CONTROL NOTES:
- DEVELOPER/OWNER: OCONEE COUNTY GOVERNMENT, 23 N. MAIN STREET, WATKINSVILLE, GA. 30677, (706) 769-2939
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 - MAINTENANCE OF ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES AND PRACTICES, WHETHER TEMPORARY OR PERMANENT, SHALL AT ALL TIMES BE THE RESPONSIBILITY OF THE PROPERTY OWNER.
 - ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.
 - ALL FILL SLOPES SHALL HAVE SILT FENCE PLACED AT THE SLOPE'S TOE.
 - CONCENTRATED FLOW AREAS AND ALL SLOPES STEEPER THAN 2.5:1 WITH A HEIGHT OF TEN FEET OR GREATER SHALL BE STABILIZED WITH APPROPRIATE EROSION CONTROL MATTING OR BLANKET.
 - THE PROFESSIONAL WHO SEALS THIS PLAN CERTIFIES UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY THE PROFESSIONAL OR THE PROFESSIONAL'S AUTHORIZED AGENT, UNDER THE PROFESSIONAL'S DIRECT SUPERVISION.
 - UPON NOTIFICATION AND AUTHORIZATION OF THE OWNER, THE DESIGN PROFESSIONAL WHO PREPARED THE ES&PC PLAN IS RESPONSIBLE FOR INSPECTING THE INSTALLATION OF THE BMP'S WITHIN 7 DAYS AFTER INITIAL CONSTRUCTION ACTIVITIES BEGINS.
 - THE RECEIVING WATER(S) IS UNNAMED TRIBUTARY TO BARBER CREEK.
 - AMENDMENTS/REVISIONS TO THE ES&PC PLAN WHICH HAVE SIGNIFICANT EFFECT ON BMP'S WITH HYDRAULIC COMPONENT MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL.
 - MAINTENANCE OF ALL EROSION CONTROL MEASURES, WHETHER TEMPORARY OR PERMANENT, SHALL AT ALL TIME BE THE RESPONSIBILITY OF THE OWNER.

REVISION BLOCK:	REV. #	DATE	REVISION
A	1	01/19/2019	INITIAL REVIEW
B	2	03/19/2019	90% SUBMITTAL
C	3	04/01/2019	ISSUE FOR REVIEW
D	4	04/12/2019	CONTRACTOR BID



04/12/19



CARTER ENGINEERING CONSULTANTS

Carter Engineering Consultants, Inc.
3651 Mars Hill Road, Suite 2000
Watkinsville, GA 30677
P: 770.725.1200
F: 770.725.1204
www.carterengineering.net

ROUNDABOUT PLANS
for
OCONEE COUNTY GOVERNMENT
STAFF AND BUS ENTRANCE AND MALCOLM BRIDGE RD.

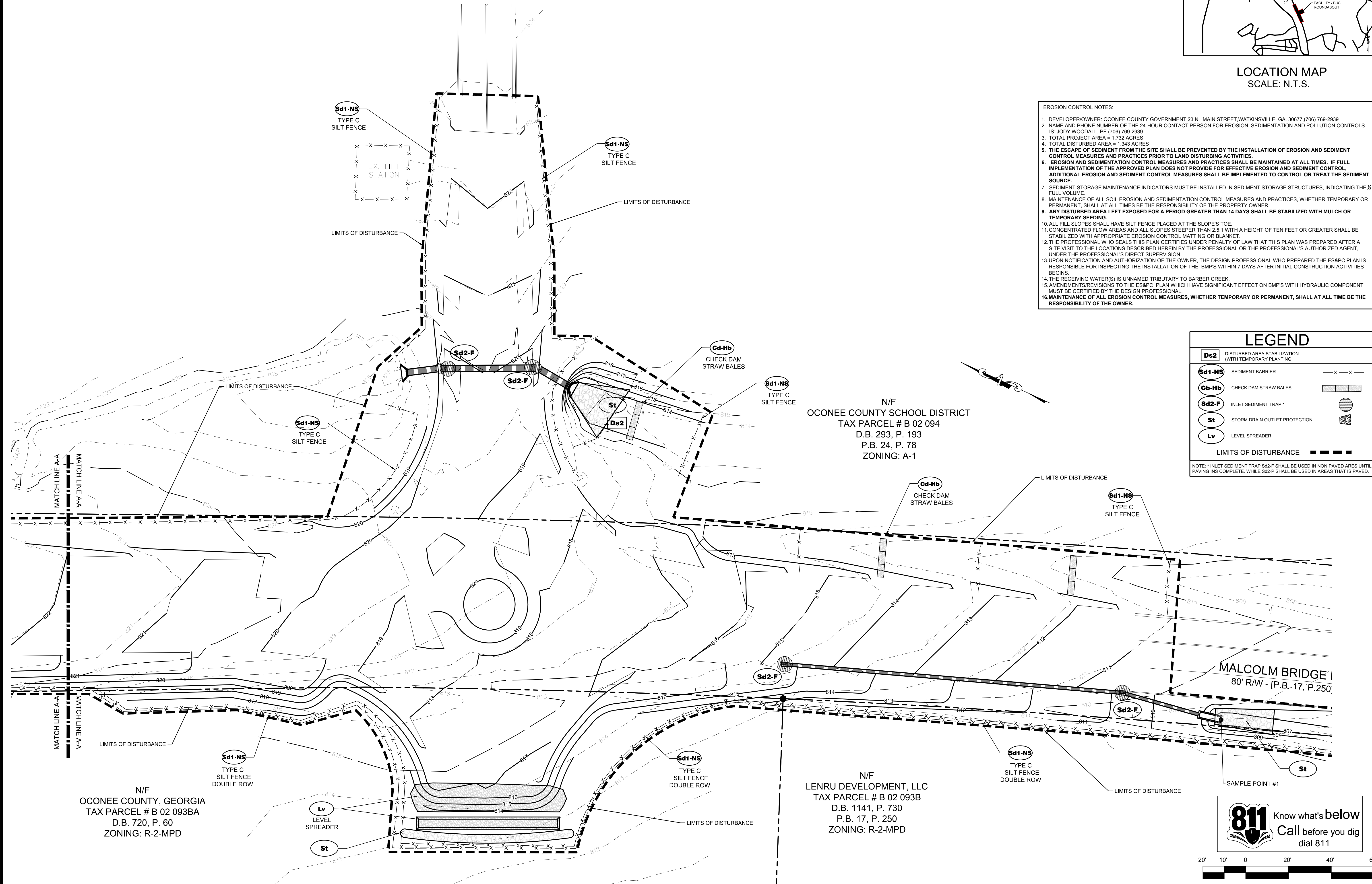
PROJECT NAME:
ROUNDABOUT PLANS

SHEET TITLE:
PHASE II
ES&PC PLAN

SHEET NUMBER:
E-1.3

PROJECT NUMBER:
18001OCG

DATE:
04/01/19



LEGEND

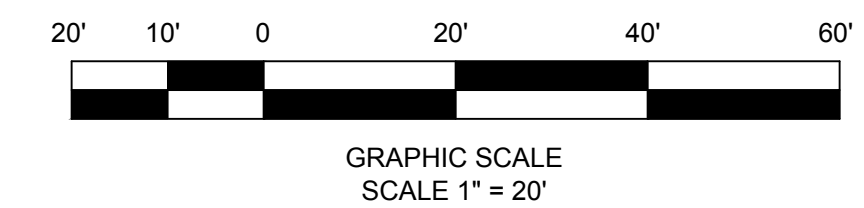
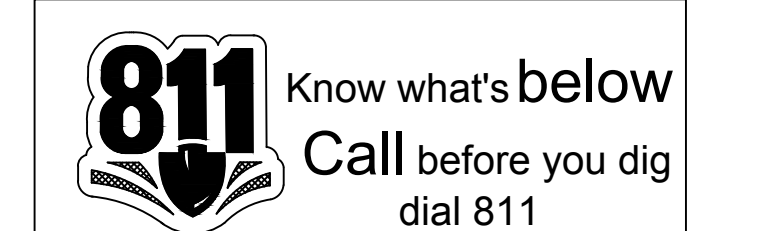
Ds2	DISTURBED AREA STABILIZATION (WITH TEMPORARY PLANTING)
Sd1-NS	SEDIMENT BARRIER
Cd-Hb	CHECK DAM STRAW BALES
Sd2-F	INLET SEDIMENT TRAP
St	STORM DRAIN OUTLET PROTECTION
Lv	LEVEL SPREADER
LIMITS OF DISTURBANCE	

NOTE: * INLET SEDIMENT TRAP Sd2-F SHALL BE USED IN NON PAVED AREAS UNTIL PAVING IS COMPLETE. WHILE Sd2-P SHALL BE USED IN AREAS THAT IS PAVED.

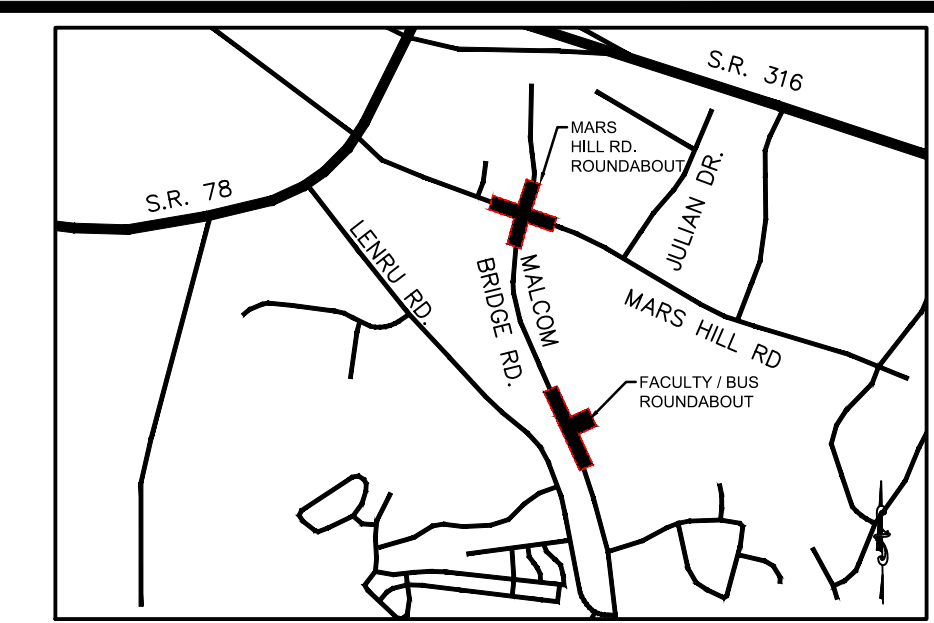
N/F
OCONEE COUNTY SCHOOL DISTRICT
TAX PARCEL # B 02 094
D.B. 293, P. 193
P.B. 24, P. 78
ZONING: A-1

N/F
LENRU DEVELOPMENT, LLC
TAX PARCEL # B 02 093B
D.B. 1141, P. 730
P.B. 17, P. 250
ZONING: R-2-MPD

N/F
OCONEE COUNTY, GEORGIA
TAX PARCEL # B 02 093BA
D.B. 720, P. 60
ZONING: R-2-MPD



TOTAL AND DISTURBED ACREAGE
 Total Acreage = 1.72 Acres
 Less Milled and Overlaid Asphalt = 0.39 Acres
 Disturbed Area = 1.34 Acres



LOCATION MAP
SCALE: N.T.S.

- EROSION CONTROL NOTES:**
- DEVELOPER/OWNER: OCONEE COUNTY GOVERNMENT, 23 N. MAIN STREET, WATKINSVILLE, GA. 30677, (706) 769-2939
 - NAME AND PHONE NUMBER OF THE 24-HOUR CONTACT PERSON FOR EROSION, SEDIMENTATION AND POLLUTION CONTROLS IS: JODY WOODALL, PE (706) 769-2939
 - TOTAL PROJECT AREA = 1.72 ACRES
 - TOTAL DISTURBED AREA = 1.343 ACRES
 - THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO LAND DISTURBING ACTIVITIES.
 - EROSION AND SEDIMENTATION CONTROL MEASURES AND PRACTICES SHALL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION AND SEDIMENT CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.
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 - MAINTENANCE OF ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES AND PRACTICES, WHETHER TEMPORARY OR PERMANENT, SHALL AT ALL TIMES BE THE RESPONSIBILITY OF THE PROPERTY OWNER.
 - ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.
 - ALL FILL SLOPES SHALL HAVE SILT FENCE PLACED AT THE SLOPE'S TOE.
 - CONCENTRATED FLOW AREAS AND ALL SLOPES STEEPER THAN 2.5:1 WITH A HEIGHT OF TEN FEET OR GREATER SHALL BE STABILIZED WITH APPROPRIATE EROSION CONTROL MATTING OR BLANKET.
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LEGEND

Ds2	DISTURBED AREA STABILIZATION (WITH TEMPORARY PLANTING)	
Sd1-NS	SEDIMENT BARRIER	— X — X —
Cb-Hb	CHECK DAM STRAW BALES	— [] — [] —
Sd2-F	INLET SEDIMENT TRAP	○
St	STORM DRAIN OUTLET PROTECTION	■
Lv	LEVEL SPREADER	○
LIMITS OF DISTURBANCE		— — — — —

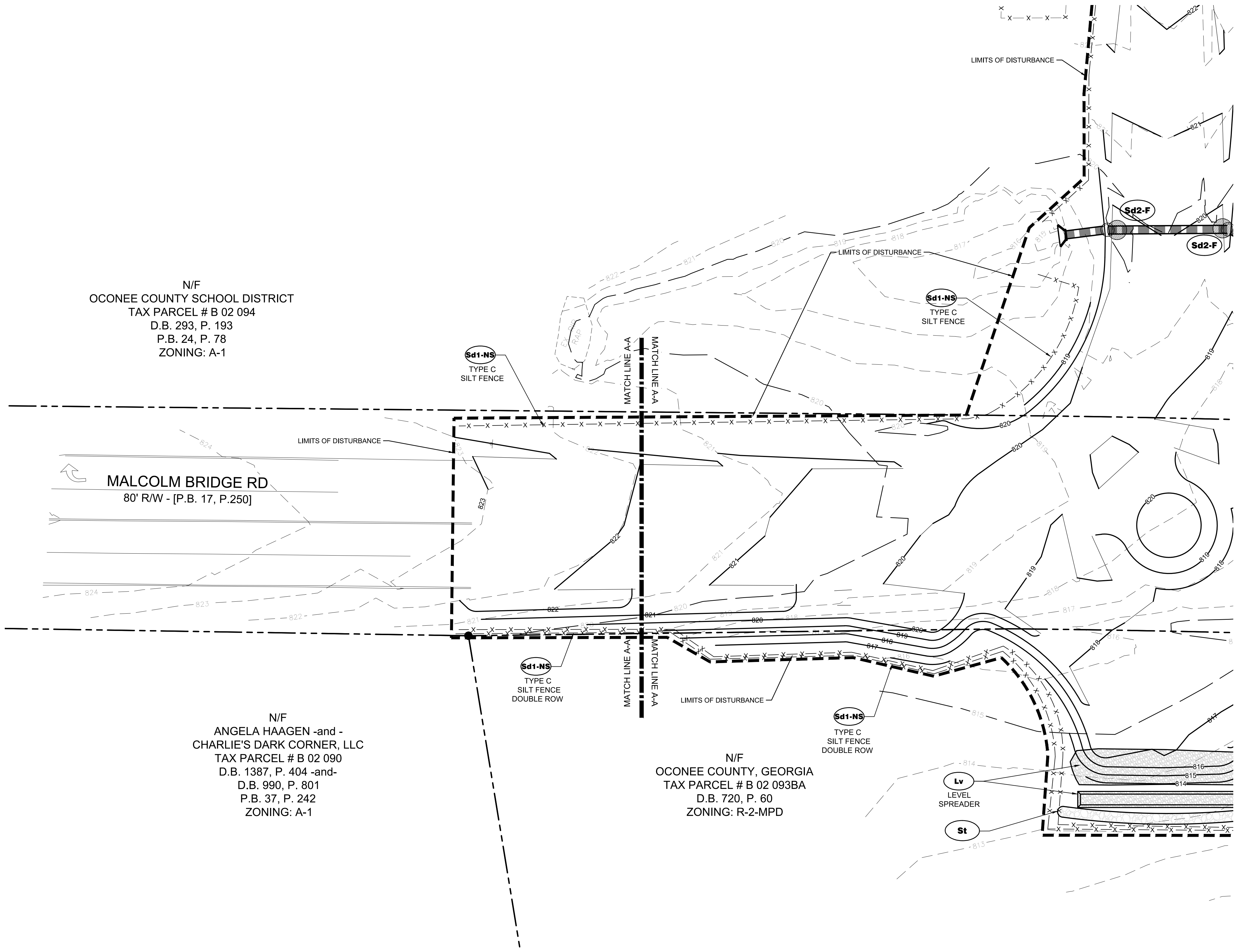
NOTE: INLET SEDIMENT TRAP Sd2-F SHALL BE USED IN NON PAVED AREAS UNTIL PAVING IS COMPLETE. WHILE Sd2-P SHALL BE USED IN AREAS THAT IS PAVED.

N/F
 OCONEE COUNTY SCHOOL DISTRICT
 TAX PARCEL # B 02 094
 D.B. 293, P. 193
 P.B. 24, P. 78
 ZONING: A-1

MALCOLM BRIDGE RD
 80' R/W - [P.B. 17, P.250]

N/F
 ANGELA HAAGEN -and -
 CHARLIE'S DARK CORNER, LLC
 TAX PARCEL # B 02 090
 D.B. 1387, P. 404 -and-
 D.B. 990, P. 801
 P.B. 37, P. 242
 ZONING: A-1

N/F
 OCONEE COUNTY, GEORGIA
 TAX PARCEL # B 02 093BA
 D.B. 720, P. 60
 ZONING: R-2-MPD



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ES&C CERTIFICATION
 NUMBER 000045579

04/12/19

CARTER ENGINEERING CONSULTANTS

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 Watkinsville, GA 30677
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 F: 770.725.1204
 www.carterengineering.net

ROUNDABOUT PLANS
 for
OCONEE COUNTY GOVERNMENT
 STAFF AND BUS ENTRANCE AND MALCOLM BRIDGE RD.

PROJECT NAME:
ROUNDABOUT PLANS

SHEET TITLE:
PHASE II ES&PC PLAN

SHEET NUMBER:
E-1.3.1

PROJECT NUMBER:
18001OCG

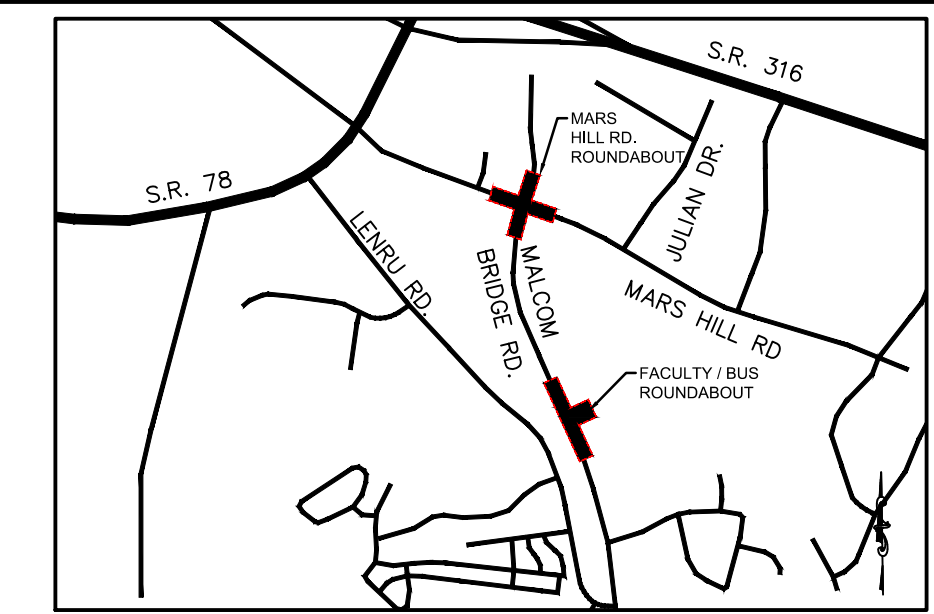
DATE:
04/01/19

811 Know what's below
 Call before you dig
 dial 811

20' 10' 0 20' 40' 60'

GRAPHIC SCALE
 SCALE 1" = 20'

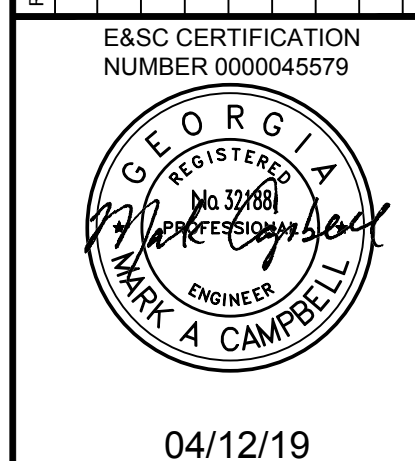
TOTAL AND DISTURBED ACREAGE
 Total Acreage = 1.72 Acres
 Less Milled and Overlaid Asphalt = 0.39 Acres
 Disturbed Area = 1.34 Acres



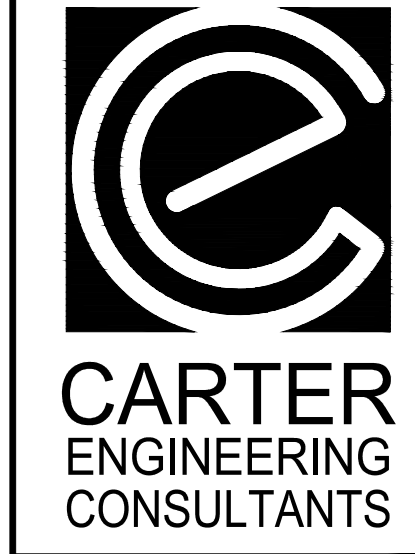
LOCATION MAP
SCALE: N.T.S.

- EROSION CONTROL NOTES:**
1. DEVELOPER/OWNER: OCONEE COUNTY GOVERNMENT, 23 N. MAIN STREET, WATKINSVILLE, GA. 30677 (706) 769-2939
 2. NAME AND PHONE NUMBER OF THE 24-HOUR CONTACT PERSON FOR EROSION, SEDIMENTATION AND POLLUTION CONTROLS IS: JODY WOODALL, PE (706) 769-2939
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 5. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO LAND DISTURBING ACTIVITIES.
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04/12/19



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ROUNDABOUT PLANS
 for
OCONEE COUNTY GOVERNMENT
 STAFF AND BUS ENTRANCE AND MALCOM BRIDGE RD.

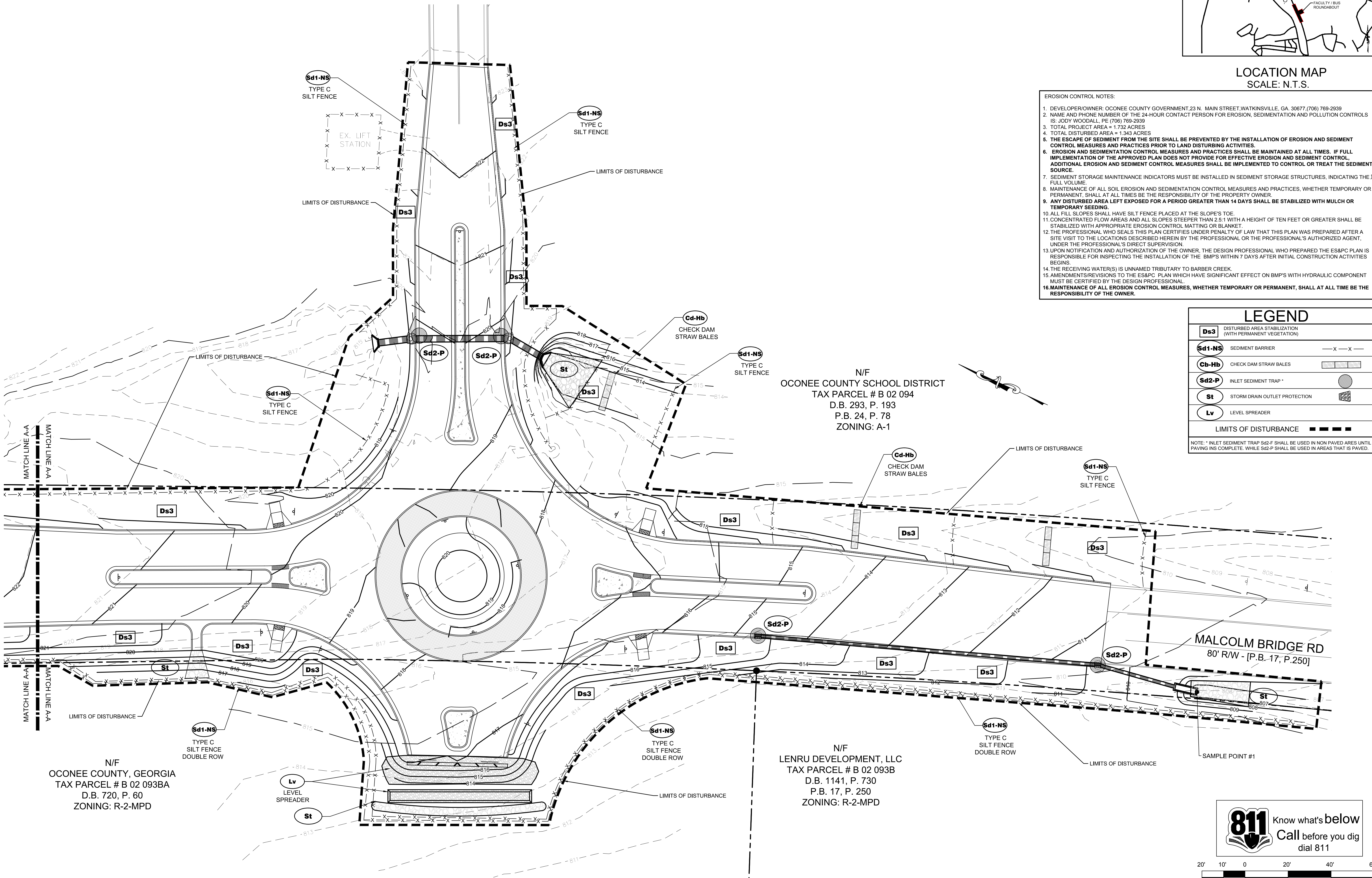
PROJECT NAME:
ROUNDABOUT PLANS

SHEET TITLE:
PHASE III ES&PC PLAN

SHEET NUMBER:
E-1.4

PROJECT NUMBER:
180010CG

DATE:
04/01/19



LEGEND

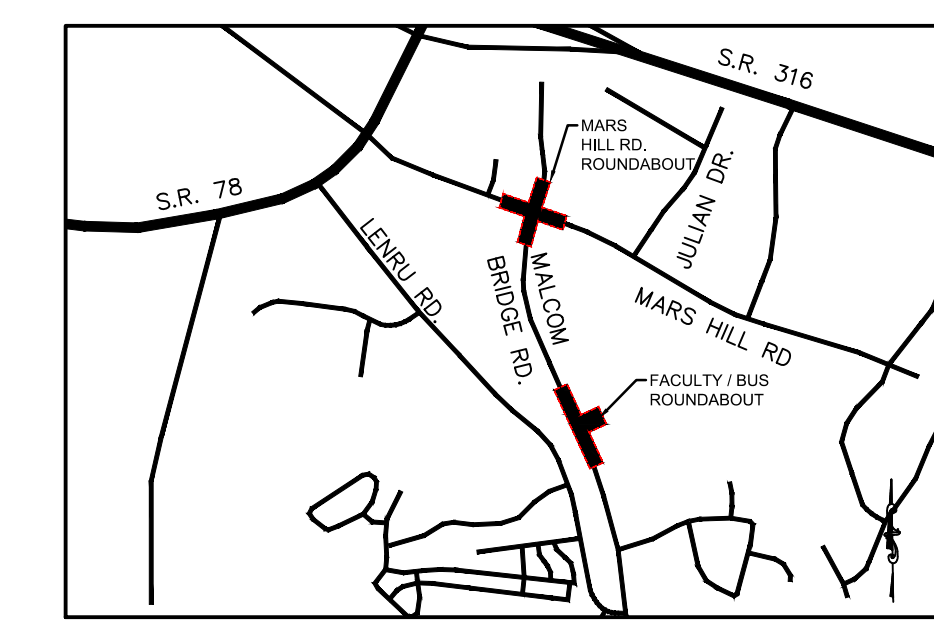
Ds3	DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION)	---X---X---
Sd1-NS	SEDIMENT BARRIER	---X---X---
Cd-Hb	CHECK DAM STRAW BALES	--- ---
Sd2-P	INLET SEDIMENT TRAP	○
St	STORM DRAIN OUTLET PROTECTION	■
Lv	LEVEL SPREADER	□
LIMITS OF DISTURBANCE		--- ---

NOTE: * INLET SEDIMENT TRAP Sd2-F SHALL BE USED IN NON PAVED AREAS UNTIL PAVING IS COMPLETE. WHILE Sd2-P SHALL BE USED IN AREAS THAT IS PAVED.

811 Know what's below
 Call before you dig
 dial 811

GRAPHIC SCALE
SCALE 1" = 20'

TOTAL AND DISTURBED ACREAGE	
Total Acreage	= 1.72 Acres
Less Milled and Overlaid Asphalt	= 0.39 Acres
Disturbed Area	= 1.34 Acres



LOCATION MAP
SCALE: N.T.S.

- EROSION CONTROL NOTES:
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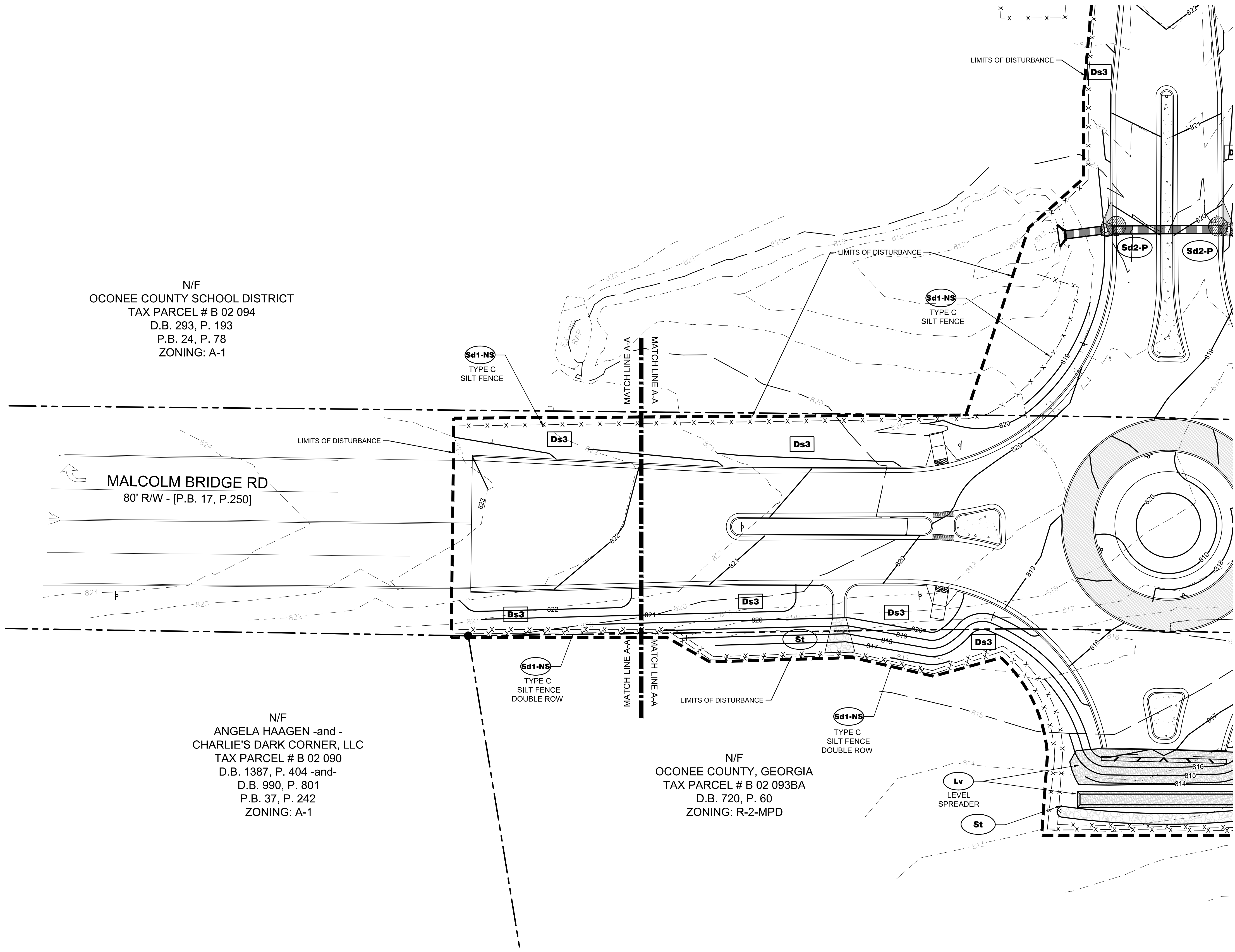
LEGEND	
Ds3	DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION)
Sd1-NS	SEDIMENT BARRIER
Cb-Hb	CHECK DAM STRAW BALES
Sd2-P	INLET SEDIMENT TRAP*
St	STORM DRAIN OUTLET PROTECTION
Lv	LEVEL SPREADER
LIMITS OF DISTURBANCE	

NOTE: * INLET SEDIMENT TRAP Sd2-F SHALL BE USED IN NON PAVED AREAS UNTIL PAVING INS COMPLETE. WHILE Sd2-P SHALL BE USED IN AREAS THAT IS PAVED.

N/F
OCONEE COUNTY SCHOOL DISTRICT
TAX PARCEL # B 02 094
D.B. 293, P. 193
P.B. 24, P. 78
ZONING: A-1

N/F
ANGELA HAAGEN -and -
CHARLIE'S DARK CORNER, LLC
TAX PARCEL # B 02 090
D.B. 1387, P. 404 -and-
D.B. 990, P. 801
P.B. 37, P. 242
ZONING: A-1

N/F
OCONEE COUNTY, GEORGIA
TAX PARCEL # B 02 093BA
D.B. 720, P. 60
ZONING: R-2-MPD



REVISION	DATE	DESCRIPTION
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C	04/01/2019	ISSUE FOR REVIEW
D	04/12/2019	CONTRACTOR BID

E&S/C CERTIFICATION
NUMBER 000045579

04/12/19

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ROUNDABOUT PLANS
for
OCONEE COUNTY GOVERNMENT
STAFF AND BUS ENTRANCE AND MALCOLM BRIDGE RD.

PROJECT NAME:
ROUNDABOUT PLANS

SHEET TITLE:
PHASE III
ES&PC PLAN

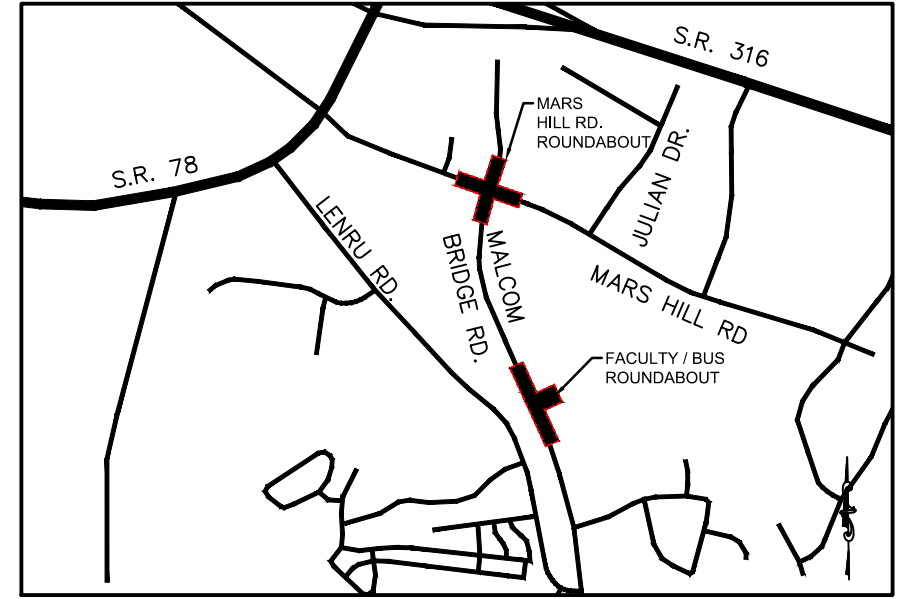
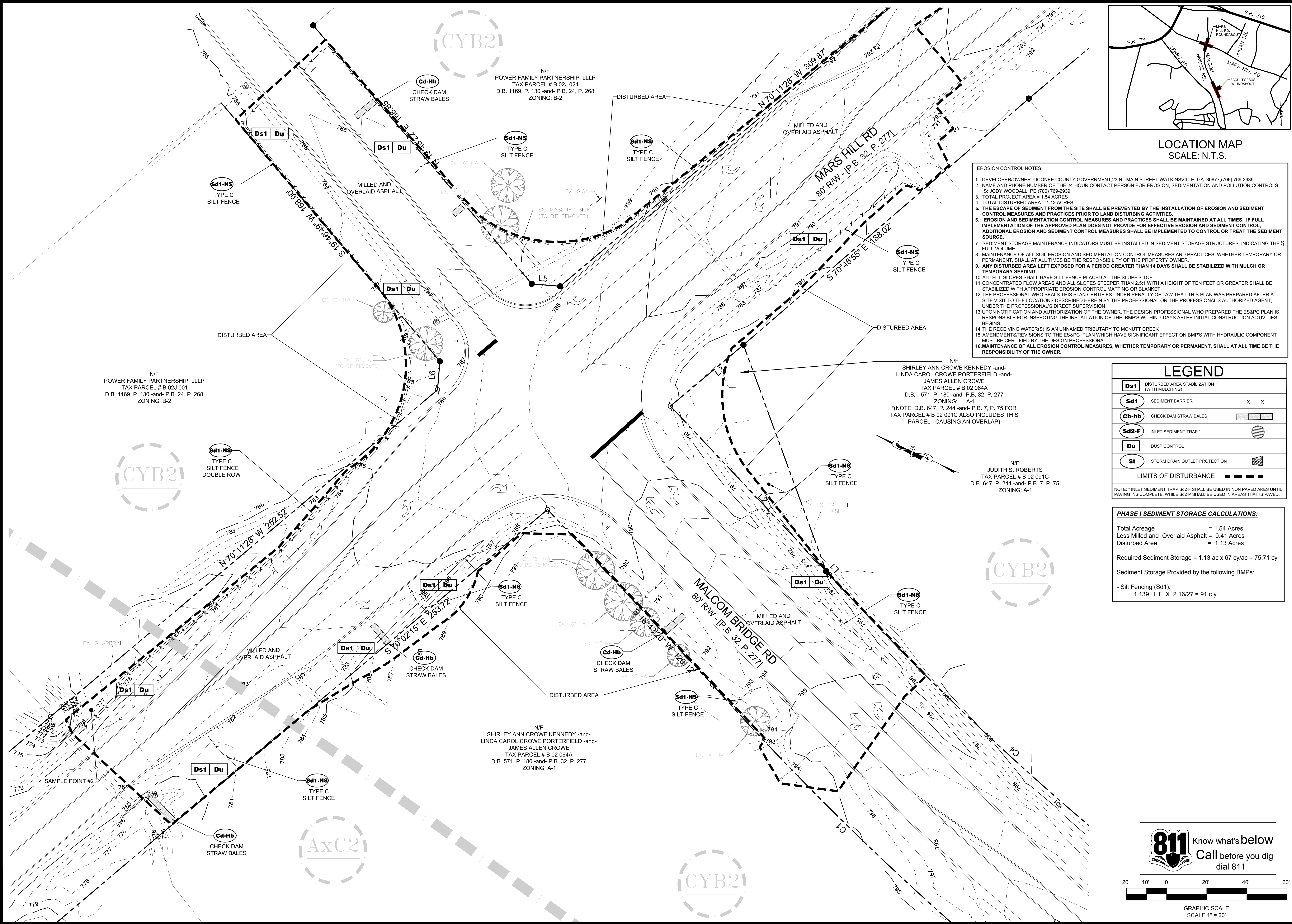
SHEET NUMBER:
E-1.4.1

PROJECT NUMBER:
18001OCG

DATE:
04/01/19

20' 10' 0 20' 40' 60'

GRAPHIC SCALE
SCALE 1" = 20'



- EROSION CONTROL NOTES:**
1. DEVELOPER/OWNER: OCONEE COUNTY GOVERNMENT, 23 N. MAIN STREET, WATKINSVILLE, GA. 30677, (706) 769-2939
 2. NAME AND PHONE NUMBER OF THE 24-HOUR CONTACT PERSON FOR EROSION, SEDIMENTATION AND POLLUTION CONTROLS IS: JOEY WOODALL, PE (706) 769-2939
 3. TOTAL PROJECT AREA = 1.54 ACRES
 4. TOTAL DISTURBED AREA = 1.13 ACRES
 5. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO LAND DISTURBING ACTIVITIES.
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LEGEND

Ds1	DISTURBED AREA STABILIZATION (WITH MULCHING)	
Sd1	SEDIMENT BARRIER	— X — X —
Cd-hb	CHECK DAM STRAW BALES	
Sd2-F	INLET SEDIMENT TRAP *	
Du	DUST CONTROL	
St	STORM DRAIN OUTLET PROTECTION	
LIMITS OF DISTURBANCE		

NOTE: * INLET SEDIMENT TRAP Sd2-F SHALL BE USED IN NON PAVED AREAS UNTIL PAVING INS COMPLETE. WHILE Sd2-P SHALL BE USED IN AREAS THAT IS PAVED.

PHASE I SEDIMENT STORAGE CALCULATIONS:

Total Acreage	= 1.54 Acres
Less Milled and Overlaid Asphalt	= 0.41 Acres
Disturbed Area	= 1.13 Acres
Required Sediment Storage	= 1.13 ac x 67 cy/ac = 75.71 cy
Sediment Storage Provided by the following BMPs:	
- Silt Fencing (Sd1):	1,139 L.F. X 2.16/27 = 91 c.y.

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	D	04/12/2019	CONTRACTOR BID

E&S&C CERTIFICATION NUMBER 0000045579

04/12/19

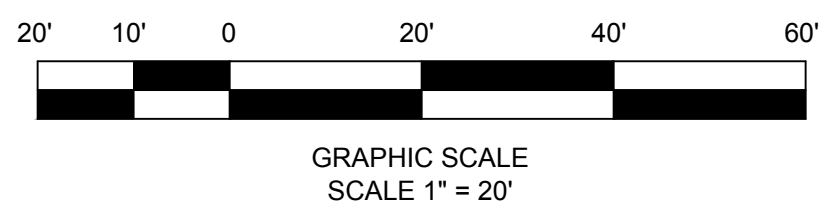
CARTER ENGINEERING CONSULTANTS

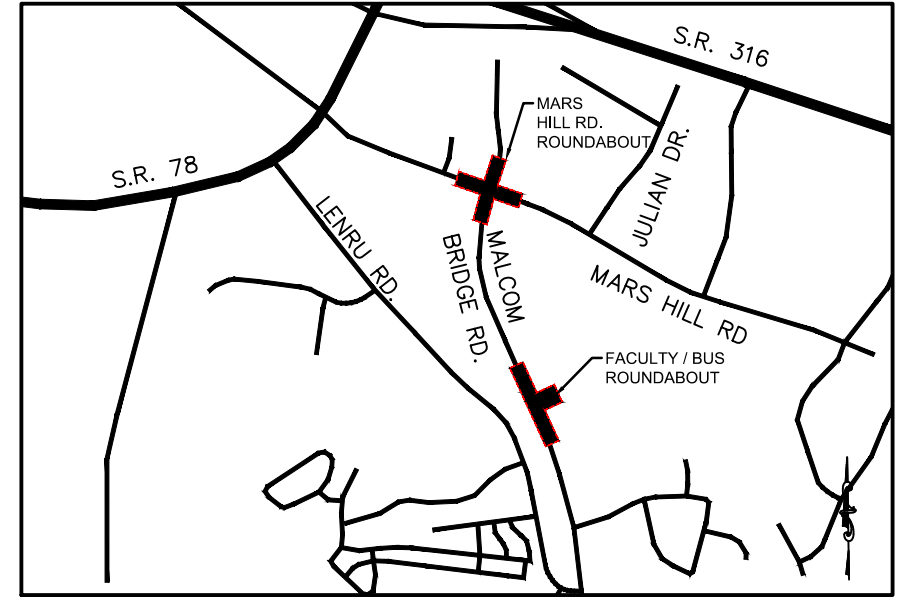
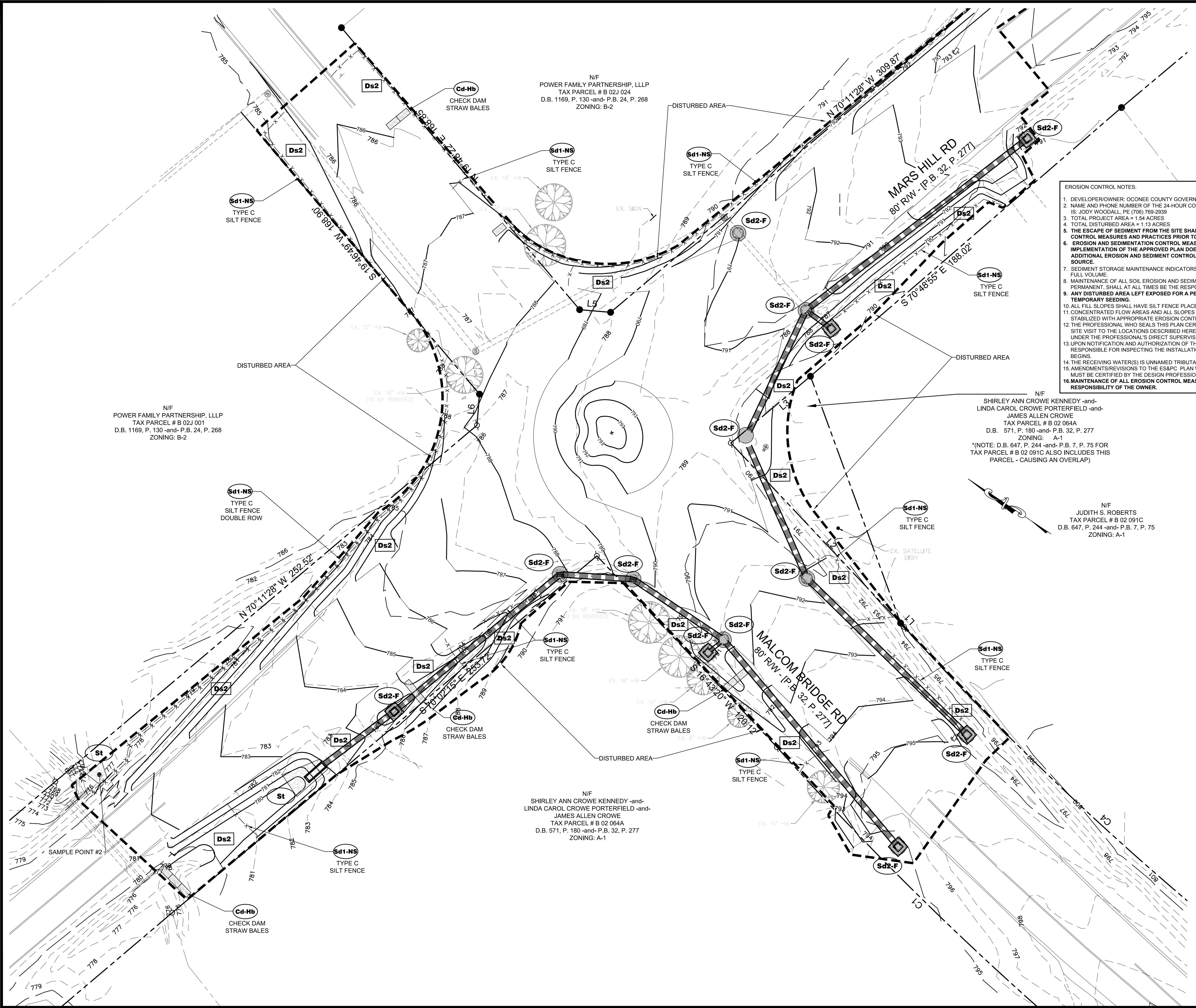
Carter Engineering Consultants, Inc.
3651 Mars Hill Road, Suite 2000
Watkinsville, GA 30677
P: 770.725.1200
F: 770.725.1204
www.carterengineering.net

ROUNDABOUT PLANS
 for
OCONEE COUNTY GOVERNMENT
 MARS HILL ROAD INTERSECTION AND MALCOM BRIDGE RD.

PROJECT NAME:	ROUNDABOUT PLANS
SHEET TITLE:	PHASE I ES&PC PLAN
SHEET NUMBER:	E-2.2
PROJECT NUMBER:	180010CG
DATE:	04/01/19

811 Know what's below
Call before you dig dial 811





LOCATION MAP
SCALE: N.T.S.

- EROSION CONTROL NOTES:**
1. DEVELOPER/OWNER: OCONEE COUNTY GOVERNMENT, 23 N. MAIN STREET, WATKINSVILLE, GA. 30677, (706) 769-2939
 2. NAME AND PHONE NUMBER OF THE 24-HOUR CONTACT PERSON FOR EROSION, SEDIMENTATION AND POLLUTION CONTROLS IS: JODY WOODALL, PE (706) 769-2939
 3. TOTAL PROJECT AREA = 1.54 ACRES
 4. TOTAL DISTURBED AREA = 1.13 ACRES
 5. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO LAND DISTURBING ACTIVITIES.
 6. EROSION AND SEDIMENTATION CONTROL MEASURES AND PRACTICES SHALL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION AND SEDIMENT CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.
 7. SEDIMENT STORAGE MAINTENANCE INDICATORS MUST BE INSTALLED IN SEDIMENT STORAGE STRUCTURES, INDICATING THE FULL VOLUME.
 8. MAINTENANCE OF ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES AND PRACTICES, WHETHER TEMPORARY OR PERMANENT, SHALL AT ALL TIMES BE THE RESPONSIBILITY OF THE PROPERTY OWNER.
 9. ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.
 10. ALL FILL SLOPES SHALL HAVE SILT FENCE PLACED AT THE SLOPE'S TOE.
 11. CONCENTRATED FLOW AREAS AND ALL SLOPES STEEPER THAN 2.5:1 WITH A HEIGHT OF TEN FEET OR GREATER SHALL BE STABILIZED WITH APPROPRIATE EROSION CONTROL MATTING OR BLANKET.
 12. THE PROFESSIONAL WHO SEALS THIS PLAN CERTIFIES UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY THE PROFESSIONAL OR THE PROFESSIONAL'S AUTHORIZED AGENT, UNDER THE PROFESSIONAL'S DIRECT SUPERVISION.
 13. UPON NOTIFICATION AND AUTHORIZATION OF THE OWNER, THE DESIGN PROFESSIONAL WHO PREPARED THE ES&PC PLAN IS RESPONSIBLE FOR INSPECTING THE INSTALLATION OF THE BMP'S WITHIN 7 DAYS AFTER INITIAL CONSTRUCTION ACTIVITIES BEGINS.
 14. THE RECEIVING WATER(S) IS UNNAMED TRIBUTARY TO MCNUIT CREEK.
 15. AMENDMENTS/REVISIONS TO THE ES&PC PLAN WHICH HAVE SIGNIFICANT EFFECT ON BMP'S WITH HYDRAULIC COMPONENT MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL.
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LEGEND

Ds2	DISTURBED AREA STABILIZATION (WITH TEMPORARY PLANTING)	— X — X —
Sd1-NS	SEDIMENT BARRIER	— X — X —
Cd-Hb	CHECK DAM STRAW BALES	[Symbol]
Sd2-F	INLET SEDIMENT TRAP *	[Symbol]
St	STORM DRAIN OUTLET PROTECTION	[Symbol]
LIMITS OF DISTURBANCE [Symbol]		

NOTE: * INLET SEDIMENT TRAP Sd2-F SHALL BE USED IN NON PAVED AREAS UNTIL PAVING IS COMPLETE. WHILE Sd2-P SHALL BE USED IN AREAS THAT IS PAVED.

TOTAL AND DISTURBED ACREAGE

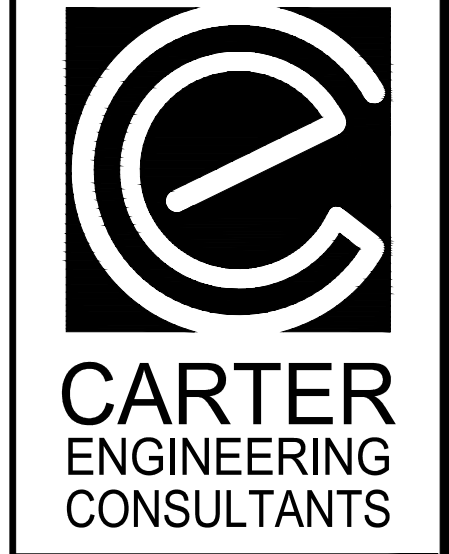
Total Acreage	= 1.54 Acres
Less Milled and Overlay Asphalt	= 0.41 Acres
Disturbed Area	= 1.13 Acres

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REV. #	DATE	REVISION
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ROUNDABOUT PLANS
for
OCONEE COUNTY GOVERNMENT
MARS HILL ROAD INTERSECTION AND MALCOM BRIDGE RD.

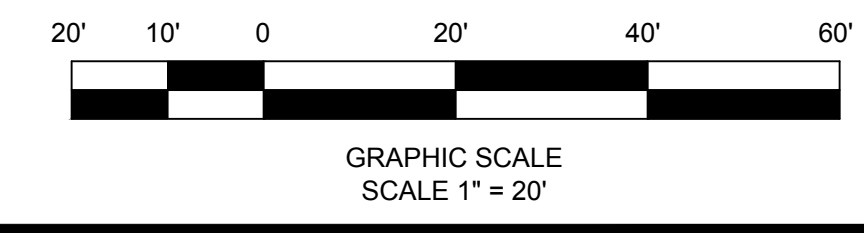
PROJECT NAME:
ROUNDABOUT PLANS

SHEET TITLE:
PHASE II ES&PC PLAN

SHEET NUMBER:
E-2.3

PROJECT NUMBER:
18001OCG

DATE:
04/01/19



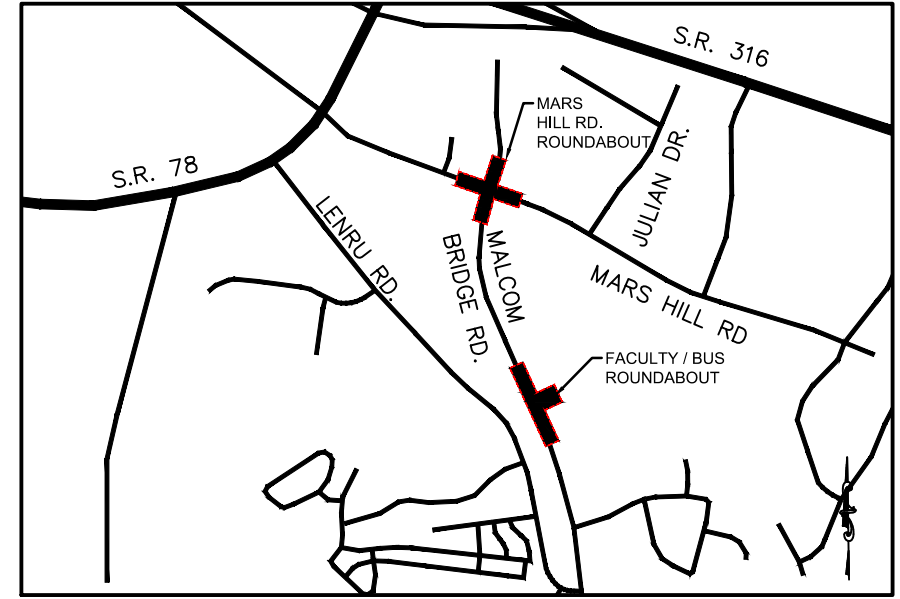
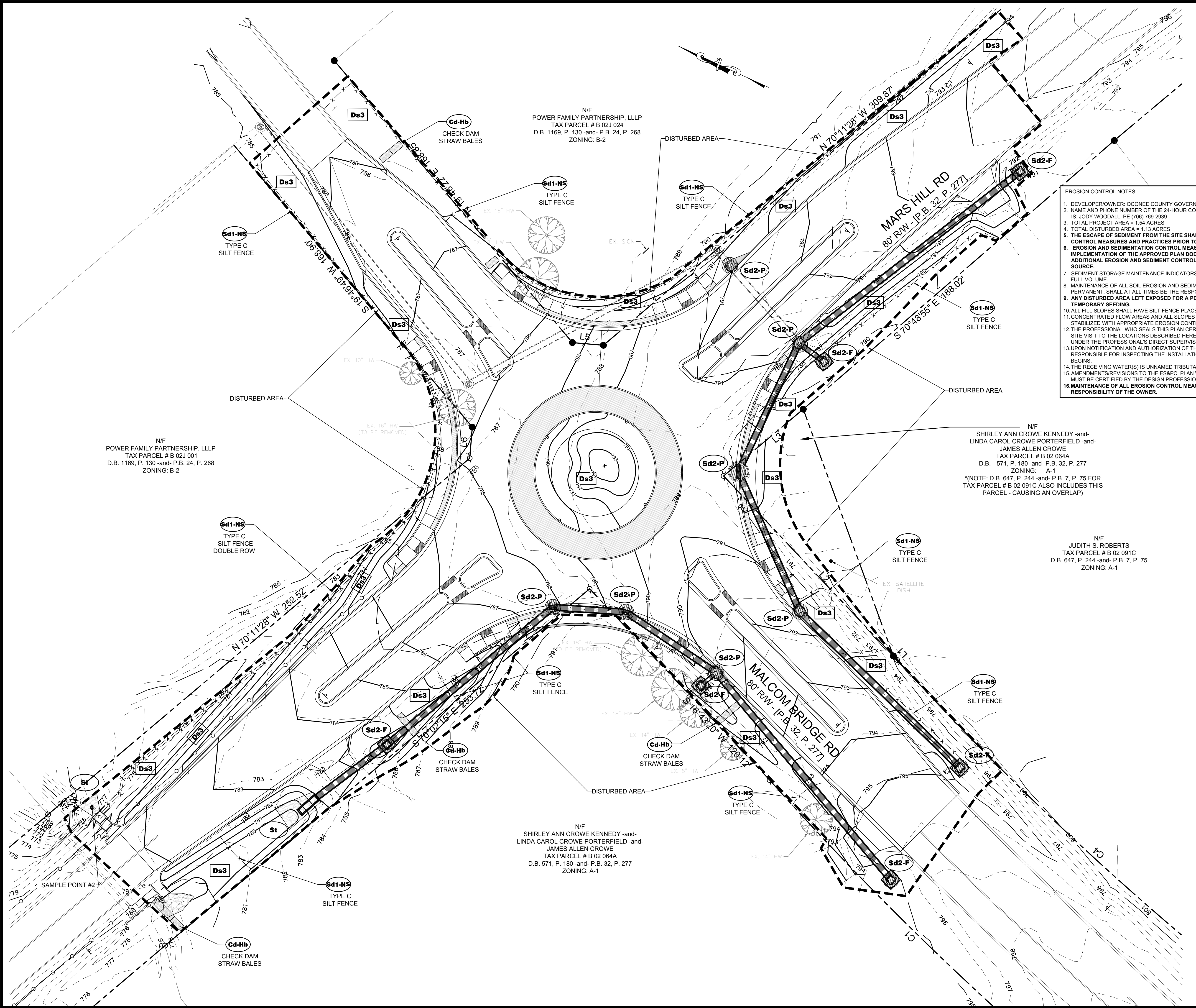
N/F
POWER FAMILY PARTNERSHIP, LLLP
TAX PARCEL # B 02J 001
D.B. 1169, P. 130 -and- P.B. 24, P. 268
ZONING: B-2

N/F
POWER FAMILY PARTNERSHIP, LLLP
TAX PARCEL # B 02J 024
D.B. 1169, P. 130 -and- P.B. 24, P. 268
ZONING: B-2

N/F
SHIRLEY ANN CROWE KENNEDY -and-
LINDA CAROL CROWE PORTERFIELD -and-
JAMES ALLEN CROWE
TAX PARCEL # B 02 064A
D.B. 571, P. 180 -and- P.B. 32, P. 277
ZONING: A-1
*(NOTE: D.B. 647, P. 244 -and- P.B. 7, P. 75 FOR
TAX PARCEL # B 02 091C ALSO INCLUDES THIS
PARCEL - CAUSING AN OVERLAP)

N/F
JUDITH S. ROBERTS
TAX PARCEL # B 02 091C
D.B. 647, P. 244 -and- P.B. 7, P. 75
ZONING: A-1

N/F
SHIRLEY ANN CROWE KENNEDY -and-
LINDA CAROL CROWE PORTERFIELD -and-
JAMES ALLEN CROWE
TAX PARCEL # B 02 064A
D.B. 571, P. 180 -and- P.B. 32, P. 277
ZONING: A-1



LOCATION MAP
SCALE: N.T.S.

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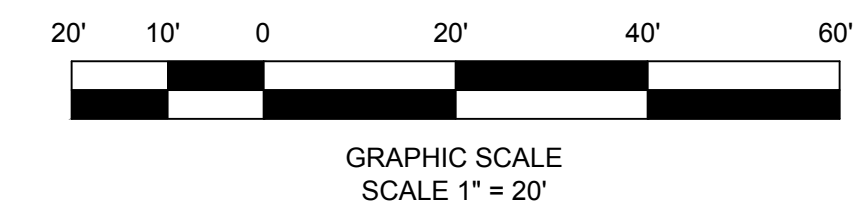
LEGEND

Ds3	DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION)	
Sd1-NS	SEDIMENT BARRIER	- x - x -
Cd-Hb	CHECK DAM STRAW BALES	[Symbol]
Sd2-P	INLET SEDIMENT TRAP	[Symbol]
St	STORM DRAIN OUTLET PROTECTION	[Symbol]
LIMITS OF DISTURBANCE [Symbol]		

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TOTAL AND DISTURBED ACREAGE

Total Acreage	= 1.54 Acres
Less Milled and Overlayed Asphalt	= 0.41 Acres
Disturbed Area	= 1.13 Acres



N/F
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TAX PARCEL # B 02J 001
D.B. 1169, P. 130 -and- P.B. 24, P. 268
ZONING: B-2

N/F
POWER FAMILY PARTNERSHIP, LLLP
TAX PARCEL # B 02J 024
D.B. 1169, P. 130 -and- P.B. 24, P. 268
ZONING: B-2

N/F
SHIRLEY ANN CROWE KENNEDY -and-
LINDA CAROL CROWE PORTERFIELD -and-
JAMES ALLEN CROWE
TAX PARCEL # B 02 064A
D.B. 571, P. 180 -and- P.B. 32, P. 277
ZONING: A-1
*(NOTE: D.B. 647, P. 244 -and- P.B. 7, P. 75 FOR
TAX PARCEL # B 02 091C ALSO INCLUDES THIS
PARCEL - CAUSING AN OVERLAP)

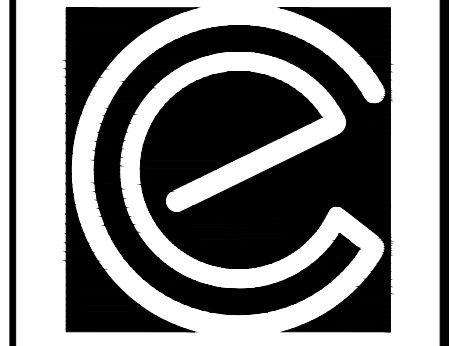
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ZONING: A-1

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04/12/19



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ROUNDABOUT PLANS
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MARS HILL ROAD INTERSECTION AND MALCOM BRIDGE RD.

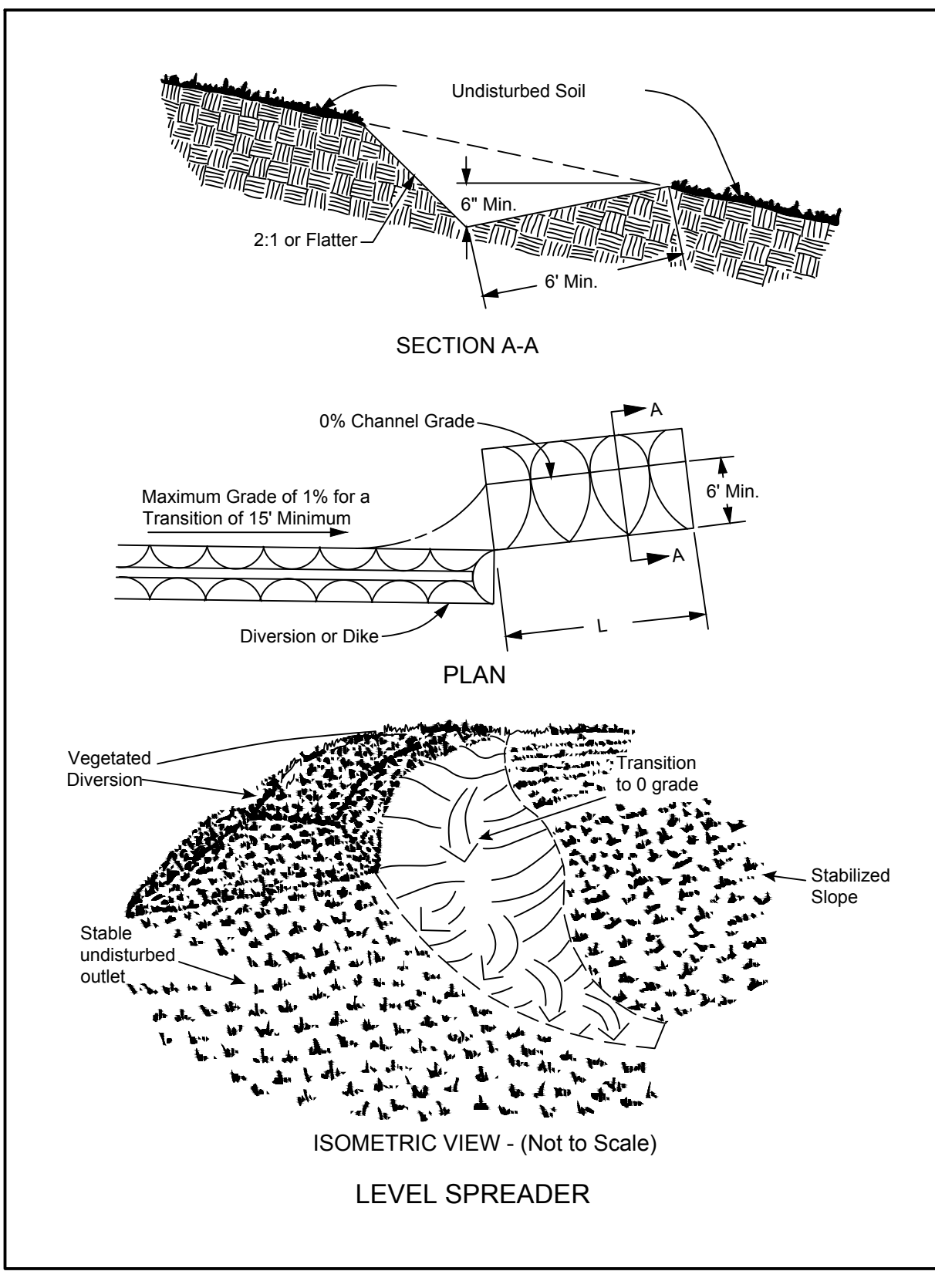
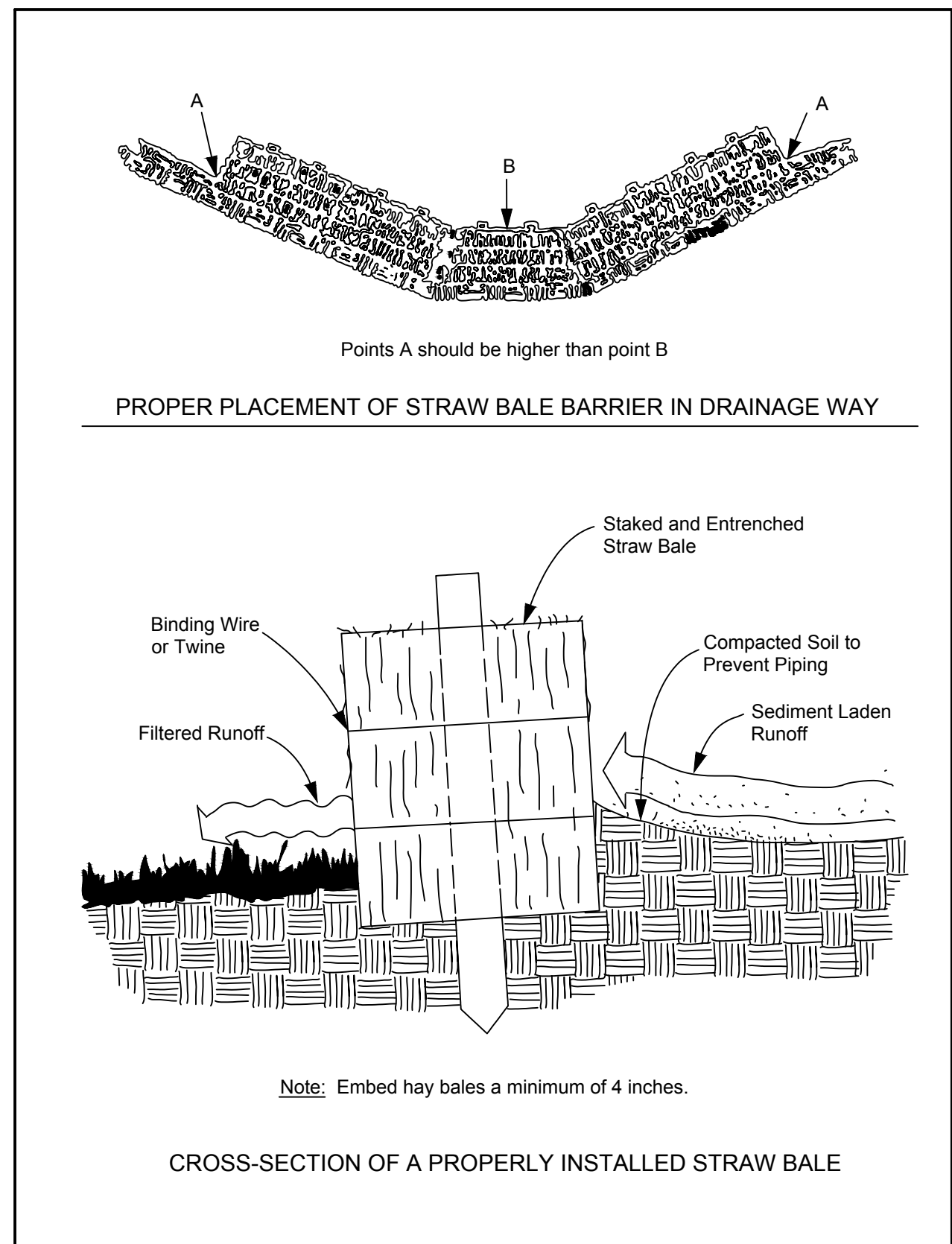
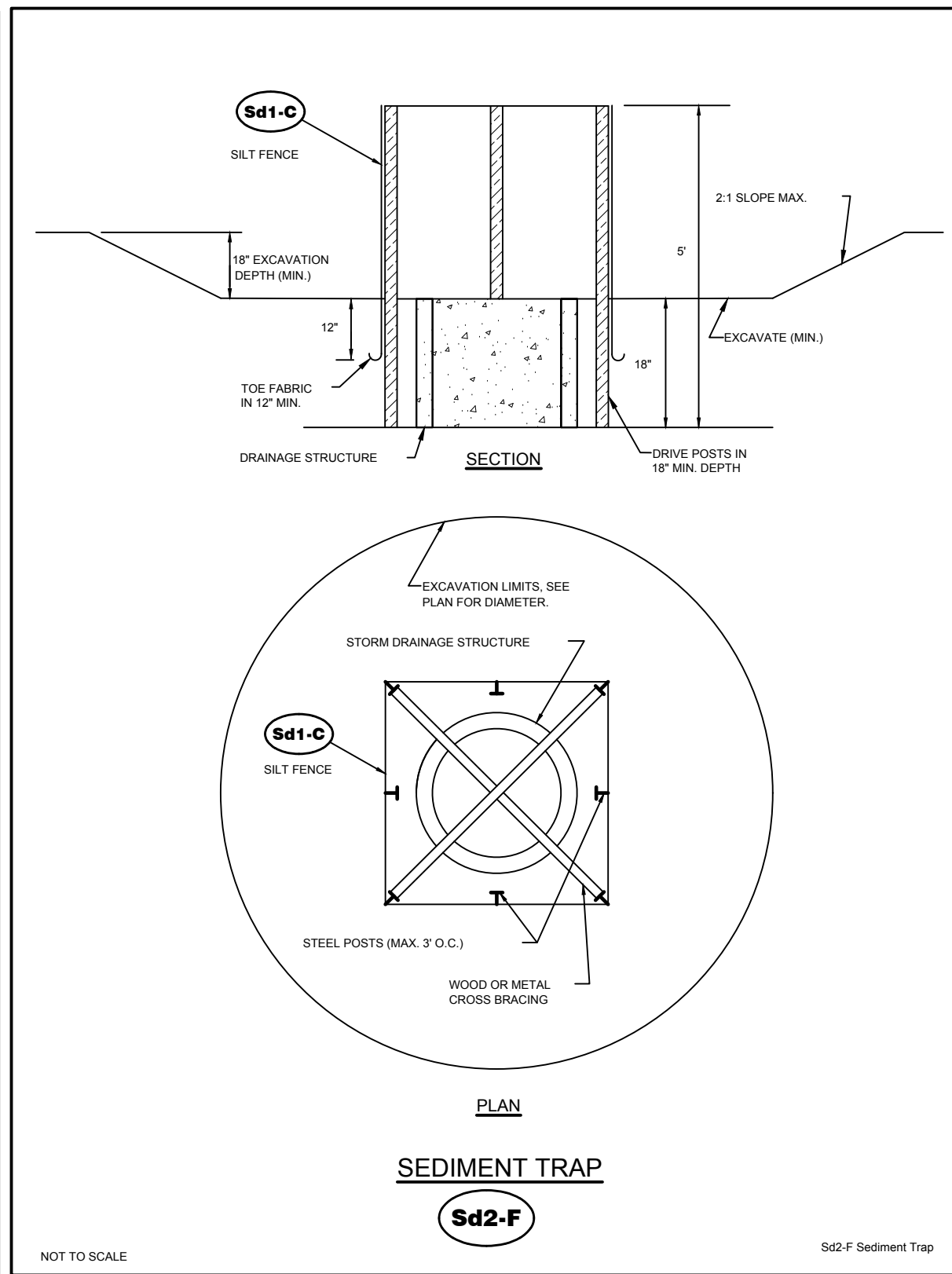
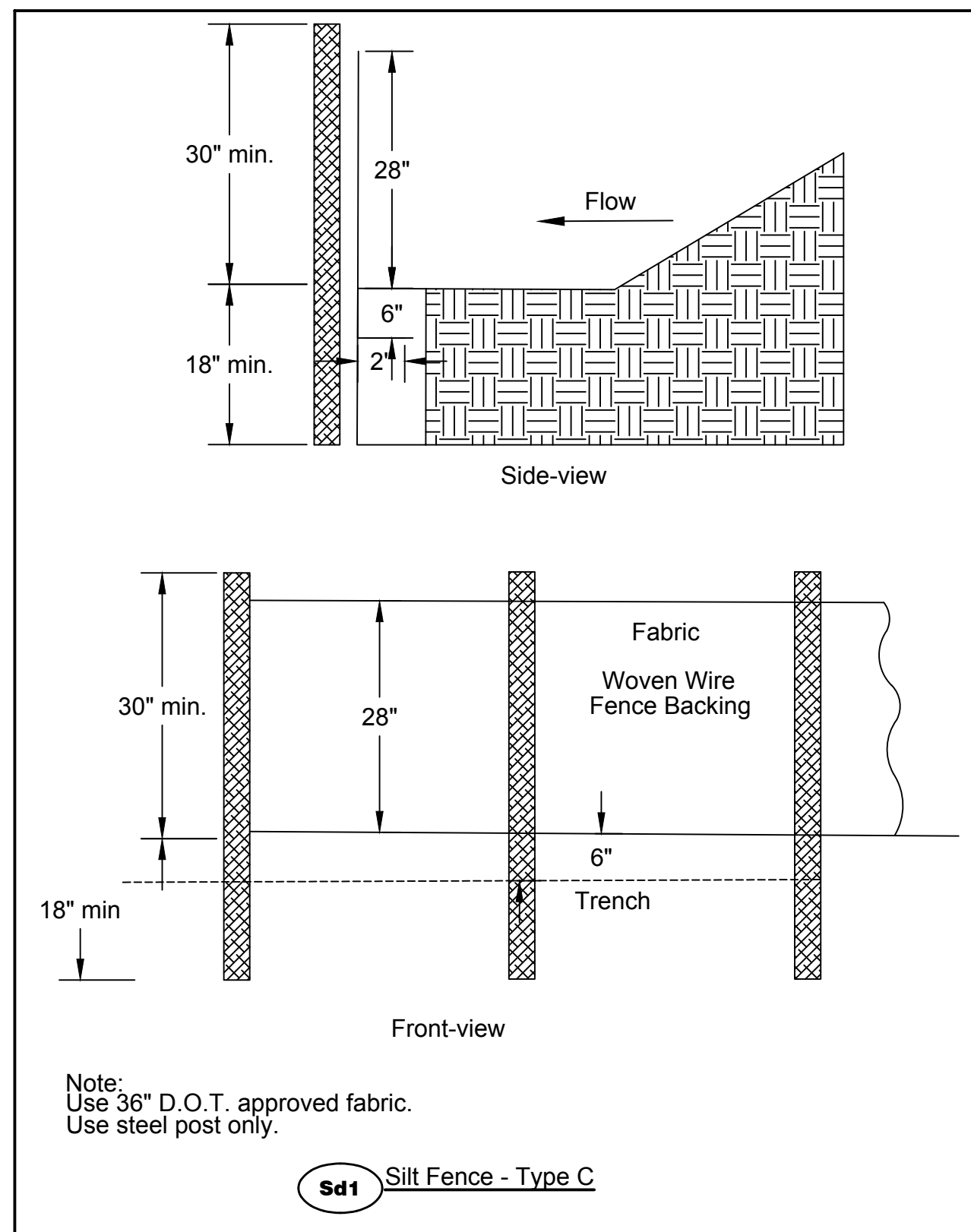
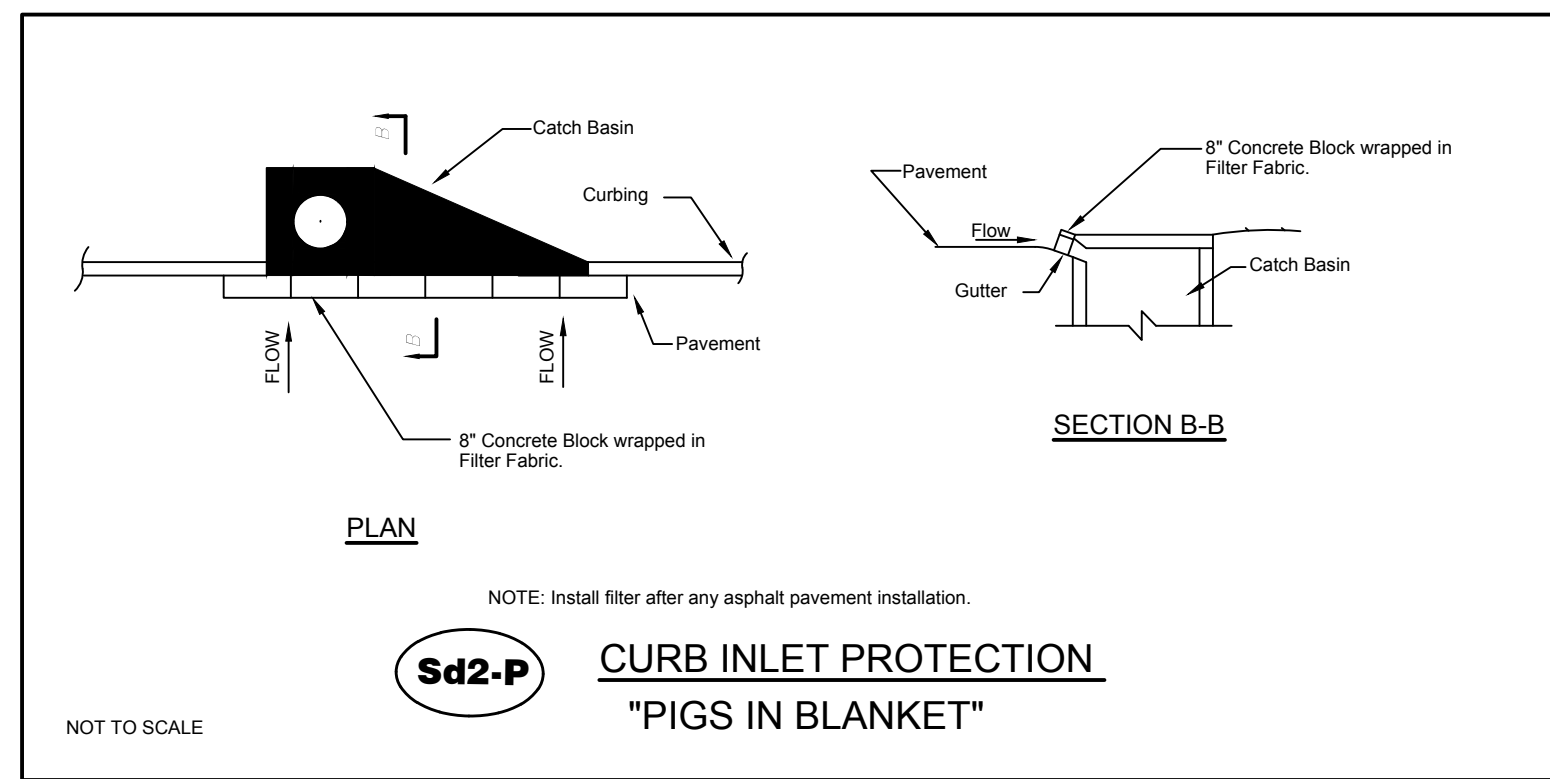
PROJECT NAME:
ROUNDABOUT PLANS

SHEET TITLE:
PHASE III ES&PC

SHEET NUMBER:
E-2.4

PROJECT NUMBER:
18001OCG

DATE:
04/01/19



MULCHING RATES **Ds1**

USE DRY STRAW OR DRY HAY OF GOOD QUALITY AND FREE OF WEED SEEDS. DRY STRAW OR HAY SHALL BE APPLIED AT THE RATE OF 2.5 TONS PER ACRE. MULCHING SHALL BE USED MULCH WILL BE SPREAD UNIFORMLY WITHIN 24 HOURS AFTER SEEDING. MULCH SHALL BE USED DURING MONTHS THAT GRASSING SHOULD NOT BE APPLIED BASED ON THE SCHEDULE BELOW.

TEMPORARY AND PERMANENT VEGETATION SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 8 OF "THE MANUAL FOR EROSION AND SEDIMENTATION CONTROL"

TEMPORARY GRASSING **Ds2**

TEMPORARY GRASSES SHALL CONSIST OF SOWING A QUICK GRASS SUCH AS RYE, BROWN TOP MILLET, OR GRASS SUITABLE TO THE AREA AND SEASON. LIME AND FERTILIZER WILL BE OMITTED. MULCH IS NOT REQUIRED BUT SHOULD BE USED AS DICTATED BY SITE CONDITIONS. TEMPORARY GRASSING IS REQUIRED WHEN DISTURBED AREA IS LEFT EXPOSED MORE THAN 14 DAYS.

SPECIES	RATE	PLANTING DATES
RYE GRASS	40#/ACRE	JAN-APR/AUG-DEC
BROWN MILLET	10-40#/ACRE	APRIL - JUNE
WEeping LOVEGRASS	1/2-3 bu./ACRE	AUGUST-DECEMBER
ANNUAL LESPEDEZA	2-4#/ACRE	FEBRUARY-JUNE
SUDAN GRASS	10-40#/ACRE	FEBRUARY-APRIL
	60#/ACRE	APRIL-AUGUST
	1/2-3bu./ACRE	SEPTEMBER-DECEMBER

PERMANENT GRASSING **Ds3**

PERMANENT GRASSING SHALL CONSIST OF GROUND PREPARATION, LIMING, FERTILIZATION, MULCHING AND SEEDING. THE GROUND SHALL BE PREPARED BY PLOWING AND DISKING TO A DEPTH NOT LESS THAN 4". FERTILIZER AND LIME SHALL BE UNIFORMLY MIXED INTO THE GROUND, WITH FERTILIZER AT THE RATE OF 150#/ACRE AND LIME AT THE RATE OF 200#/ACRE. THE GROUND SHALL BE FINISHED OFF SMOOTH AND UNIFORM AND BE FREE OF ROCKS, CLODS, ROOTS AND WEEDS. FERTILIZER SHALL BE APPLIED PER THE TABLE BELOW. WEATHER PERMITTING, SEEDING SHALL BE DONE WITHIN 24 HOURS OF FERTILIZER APPLICATION. SEED SHALL BE UNIFORMLY SPREAD AT THE RATES SHOWN BELOW. MULCHING IS REQUIRED AND SHALL BE DONE IMMEDIATELY AFTER SEEDING. MULCH SHALL BE UNIFORMLY APPLIED OVER THE AREA LEAVING APPROXIMATELY 20% OF THE GROUND SURFACE EXPOSED. THE RATE OF APPLICATION SHALL BE DOUBLED ON SLOPES STEEPER THAN 4:1.

GRASSING RATES AND SCHEDULE

SPECIES	RATE	PLANTING DATES
TALL FESCUE	30-50#/ACRE	MARCH-APRIL/AUGUST-OCTOBER
SERICEA LESPEDEZA (b)	60#/ACRE	MARCH-JUNE
WEeping LOVE GRASS	2-4#/ACRE	MARCH-JUNE
UNHILLED BERMU DA	6-10#/ACRE	JAN-FEB/OCT-DEC
HILLED BERMU DA	6-10#/ACRE	MARCH-JUNE
BAMA	30-50#/ACRE	APRIL-MARCH

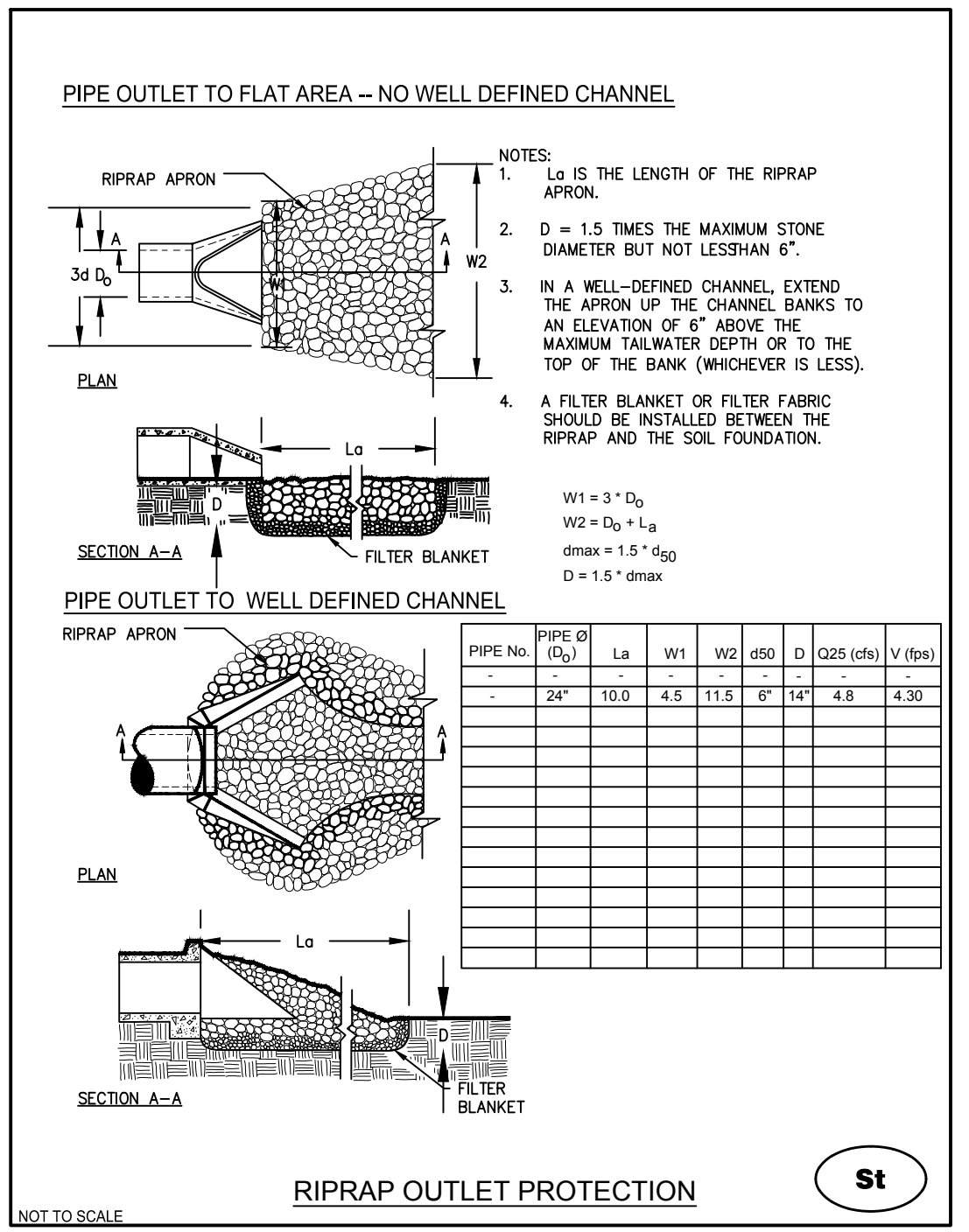
(a) USE A MINIMUM OF 40% SCARIFIED SEED. REMAINDER MAY BE UNSCARIFIED, CLEAN HILLED SEED.
(b) USE EITHER COMMON SERIAL, OR INTERSTATE SERICEA LESPEDEZA.

LIMING RATES

Agricultural lime is required at the rate of one to two tons per acre unless soil tests indicate otherwise. Graded areas require lime application. If lime is applied within six months of planting permanent perennial vegetation, additional lime is not required. Agricultural lime shall be within the specifications of the Georgia Department of Agriculture.

FERTILIZER REQUIREMENTS

TYPES OF SPECIES	YEAR	ANALYSIS OR EQUIVALENT N-P-K	RATE	N TOP DRESSING RATE
1. Cool season grasses	First	6-12-12	1500 lbs./ac.	50-100 lbs./ac. 1/2
	Second	6-12-12	1000 lbs./ac.	30
	Maintenance	10-10-10	400 lbs./ac.	
2. Cool season grasses and legumes	First	6-12-12	1500 lbs./ac.	0-50 lbs./ac. 1/
	Second	0-10-10	1000 lbs./ac.	
	Maintenance	0-10-10	400 lbs./ac.	
3. Ground Covers	First	10-10-10	1300 lbs./ac. 3/	
	Second	10-10-10	1300 lbs./ac. 3/	
	Maintenance	10-10-10	1100 lbs./ac.	
4. Shrub Lespedeza	First	0-10-10	700 lbs./ac.	
	Maintenance	0-10-10	700 lbs./ac. 4/	
5. Warm season grasses	First	6-12-12	1500 lbs./ac.	50-100 lbs./ac. 2/ 6/
	Second	6-12-12	800 lbs./ac.	50-100 lbs./ac. 2/
	Maintenance	10-10-10	400 lbs./ac.	30 lbs./ac.
6. Warm season grasses and legumes	First	6-12-12	1500 lbs./ac.	50 lbs./ac. 6/
	Second	0-10-10	1000 lbs./ac.	
	Maintenance	0-10-10	400 lbs./ac.	



REVISION BLOCK:

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E&S CERTIFICATION NUMBER 000045579

CARTER ENGINEERING CONSULTANTS

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04/12/19

ROUNDABOUT PLANS for **OCONEE COUNTY GOVERNMENT**

STAFF AND BUS ENTRANCE AND MALCOM BRIDGE RD.

PROJECT NAME:
ROUNDABOUT PLANS

SHEET TITLE:
ES&PC STANDARD DETAILS

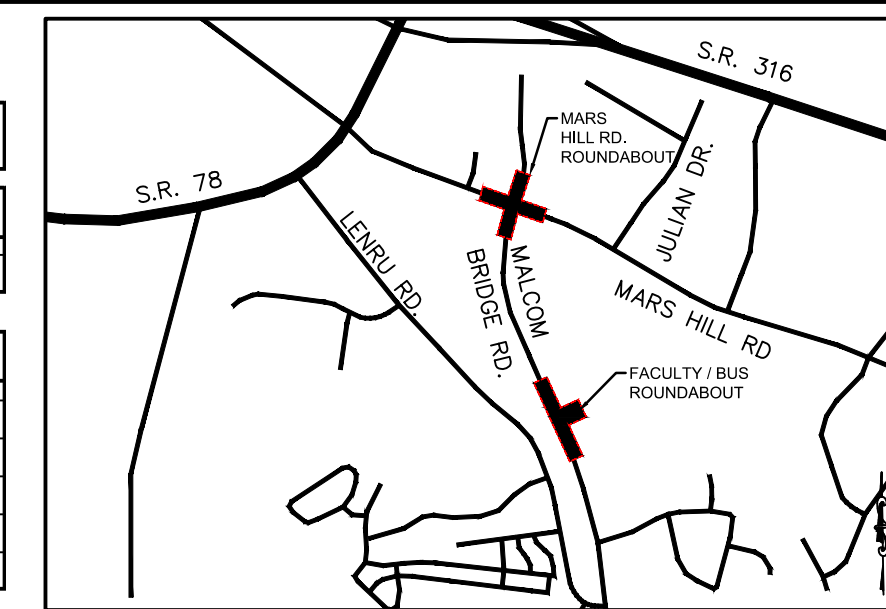
SHEET NUMBER:
E-3.1

PROJECT NUMBER:
18001OCG

DATE:
04/01/19

MARS HILL ROUNDABOUT - PLANT SCHEDULE

TOTAL QTY	BOTANICAL NAME	COMMON NAME	CAL./GAL.	SPACING	TYPE	HT./SPR. MINIMUM	REMARKS
CANOPY TREES							
3	<i>Ulmus parvifolia</i> 'Emer II'	Alleé Lacebark Elm	4" Cal.	As Shown	B & B	14' / 6'	Straight Central Leader to Min. 6' Ht., Well Spaced Branches, Symmetrical Crown (Select Trees)
EVERGREEN SHRUBS							
18	<i>Gardenia jasminoides</i> 'Radicans'	Creeping Gardenia	3 Gal.	As Shown	Container	12" / 18"	Full Pot, Well Shaped
51	<i>Ilex cornuta</i> 'Burfordi Nano'	Dwarf Burford Holly	3 Gal.	As Shown	Container	24" / 24"	Full Pot, Well Shaped
26	<i>Ilex vomitoria</i> 'Stake's Dwarf'	Dwarf Yaupon Holly	3 Gal.	As Shown	Container	18" / 18"	Full Pot, Well Shaped
40	<i>Loropetalum chinense</i> 'Shang White'	Emerald Snow Loropetalum	3 Gal.	As Shown	Container	18" / 18"	Full Pot, Well Shaped
40	<i>Loropetalum chinense</i> 'PPY PP25471'	Purple Daydream Loropetalum	3 Gal.	As Shown	Container	18" / 18"	Full Pot, Well Shaped
DECIDUOUS SHRUBS							
22	<i>Hemercallis</i> 'Stella de Oro'	Stella de Oro Daylily	1 Gal.	As Shown	Container	18" / 18"	Full Pot, Well Shaped
94	<i>Miscanthus sinensis</i> 'Gracillimus'	Maiden Grass	3 Gal.	As Shown	Container	24" / 18"	Full Pot, Well Shaped
73	<i>Rosa</i> 'Meigii'	Peach Drift Rose	3 Gal.	As Shown	Container	18" / 18"	Full Pot, Well Shaped
95	<i>Rosa</i> 'Radika'	Double Knockout Rose	3 Gal.	As Shown	Container	18" / 18"	Full Pot, Well Shaped
GROUNDCOVERS (in square feet)							
330	<i>Agapanthus africanus</i> 'Peter Pan'	Peter Pan African Lily	1 Gal.	12" O.C.	Container	12" / 12"	Full Pot, Well Shaped
170	<i>Liriope muscario</i> 'Big Blue'	Big Blue Creeping Lilyturf	1 Gal.	18" O.C.	Container	12" / 12"	Full Pot, Well Shaped
TURF GRASS (in square feet)							
0	River Rock (2-5" Rocks)	River Rock (2-5" Rocks)	---	---	ROCK	---	---
15,420	Sod (as directed by owner)	Sod (as directed by owner)	---	---	SOD	---	---



LOCATION MAP
SCALE: N.T.S.

PROJECT NOTES:

OWNER / DEVELOPER:
Oconee County Government
23 N. Main Street
Watkinsville, Ga. 30677
Contact: Jody Woodall, PE
Tel.: (706) 769-2939

ENGINEER:
Carter Engineering Consultants, Inc.
3651 Mars Hill Road, Suite 2000
Watkinsville, Georgia 30677
Contact: Mark Campbell, PE
Tel. (770) 725-1200
Mark@cartereengineering.net

Project located at Staff And Bus Entrance And Malcom Bridge Rd.

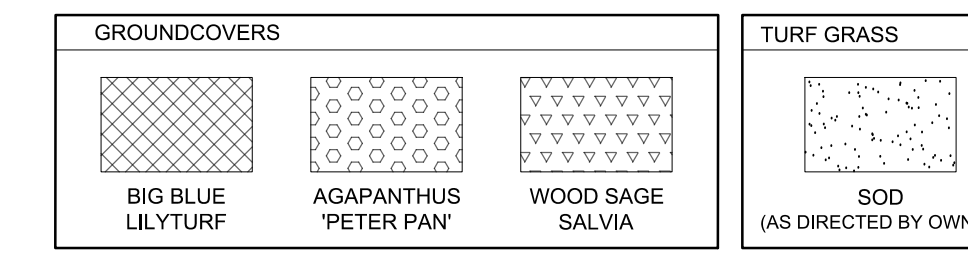
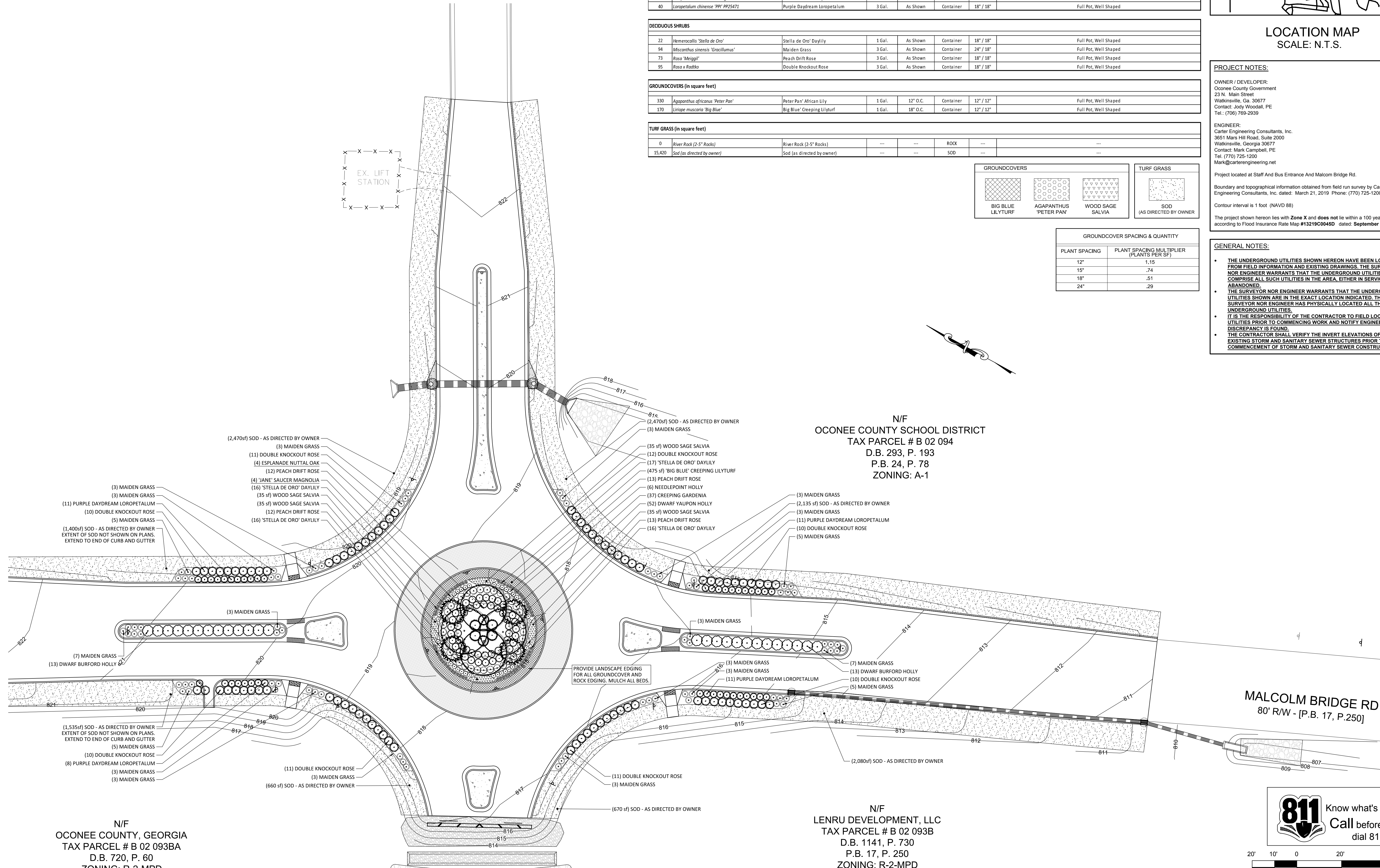
Boundary and topographical information obtained from field run survey by Carter Engineering Consultants, Inc. dated: March 21, 2019. Phone: (770) 725-1200

Contour interval is 1 foot (NAVD 88)

The project shown hereon lies with Zone X and does not lie within a 100 year flood plain according to Flood Insurance Rate Map #13219C0045D dated: September 2, 2009.

GENERAL NOTES:

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- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD LOCATE ALL UTILITIES PRIOR TO COMMENCING WORK AND NOTIFY ENGINEER IF A DISCREPANCY IS FOUND.
- THE CONTRACTOR SHALL VERIFY THE INVERT ELEVATIONS OF ALL EXISTING STORM AND SANITARY SEWER STRUCTURES PRIOR TO COMMENCEMENT OF STORM AND SANITARY SEWER CONSTRUCTION.

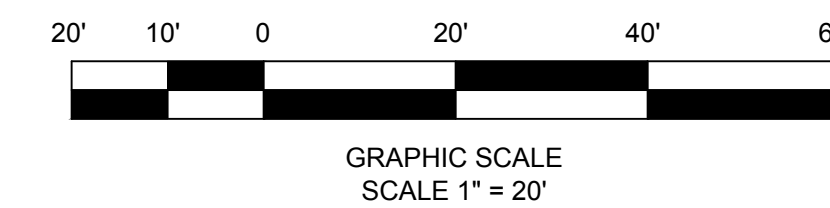
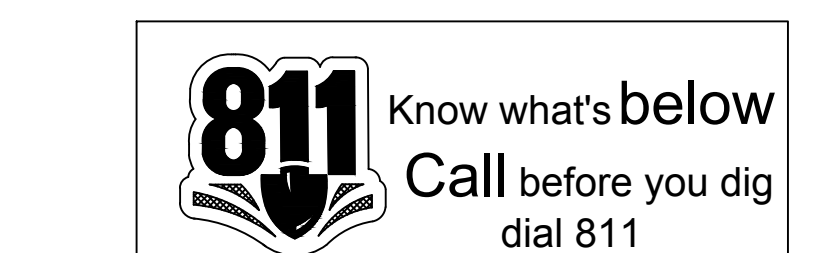


GROUNDCOVER SPACING & QUANTITY	
PLANT SPACING	PLANT SPACING MULTIPLIER (PLANTS PER SF)
12"	1.15
15"	.74
18"	.51
24"	.29

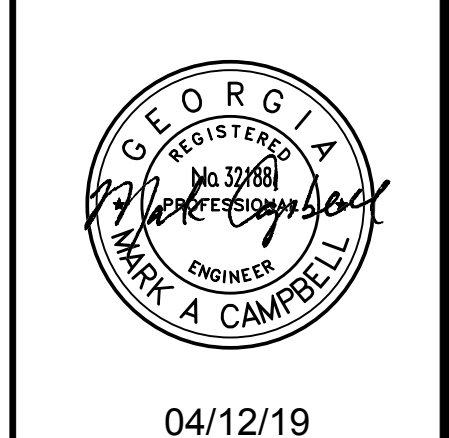
N/F
OCONEE COUNTY SCHOOL DISTRICT
TAX PARCEL # B 02 094
D.B. 293, P. 193
P.B. 24, P. 78
ZONING: A-1

N/F
LENRU DEVELOPMENT, LLC
TAX PARCEL # B 02 093B
D.B. 1141, P. 730
P.B. 17, P. 250
ZONING: R-2-MPD

N/F
OCONEE COUNTY, GEORGIA
TAX PARCEL # B 02 093BA
D.B. 720, P. 60
ZONING: R-2-MPD



REVISION BLOCK:	REV. #	DATE	REVISION
	A	01/19/2019	INITIAL REVIEW
	B	03/19/2019	90% SUBMITTAL
	C	04/01/2019	ISSUE FOR REVIEW
	D	04/12/2019	CONTRACTOR BID



04/12/19

CARTER ENGINEERING CONSULTANTS

Carter Engineering Consultants, Inc.
3651 Mars Hill Road, Suite 2000
Watkinsville, GA 30677
P: 770.725.1200
F: 770.725.1204
www.cartereengineering.net

ROUNDABOUT PLANS
for
OCONEE COUNTY GOVERNMENT
STAFF AND BUS ENTRANCE AND MALCOM BRIDGE RD.

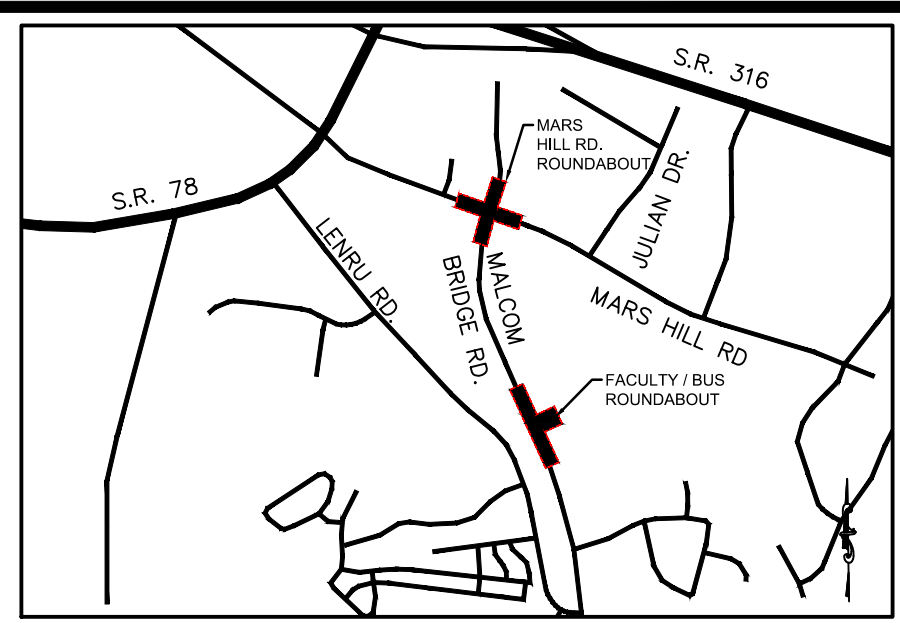
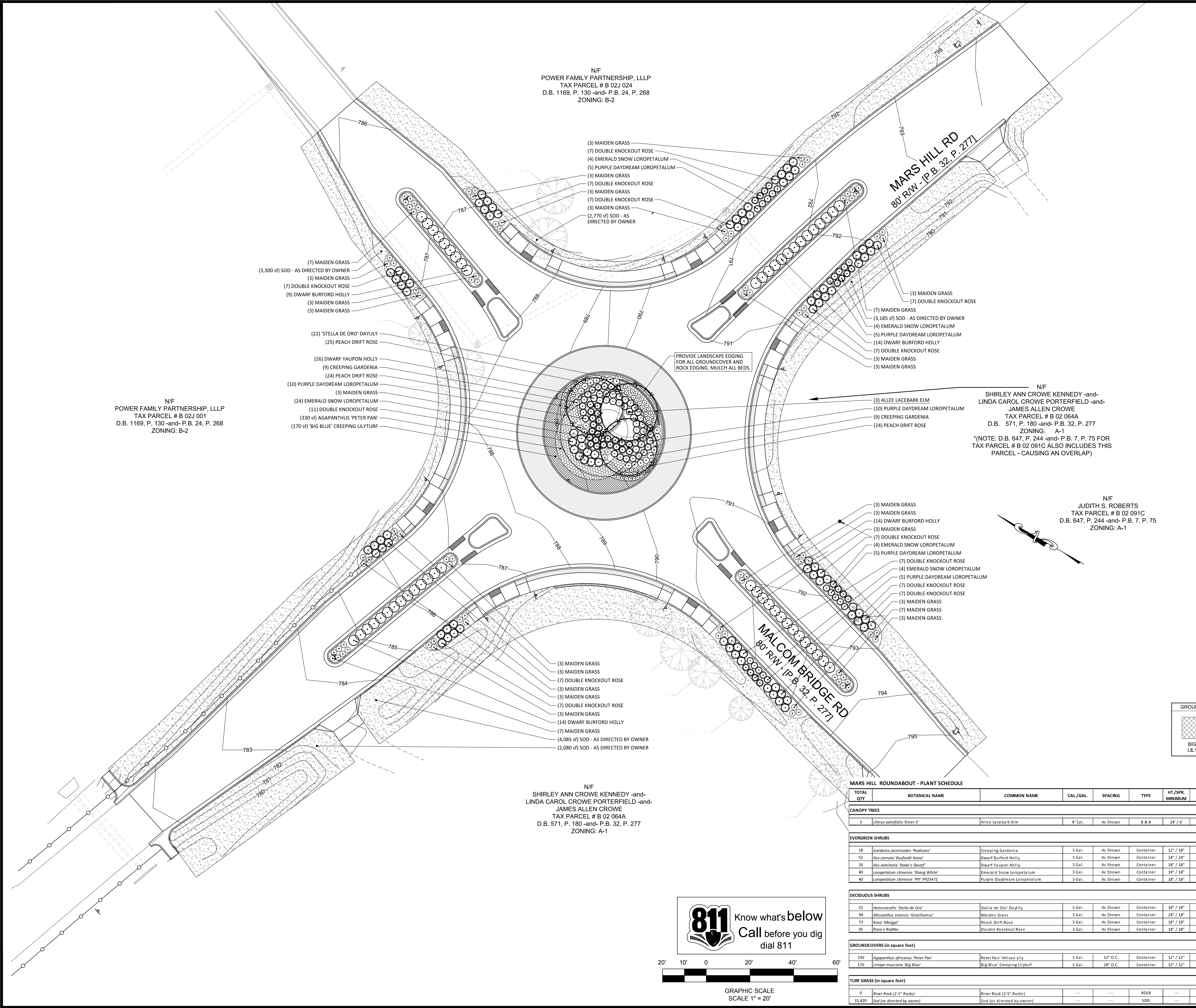
PROJECT NAME:
ROUNDABOUT PLANS

SHEET TITLE:
LANDSCAPE PLAN

SHEET NUMBER:
L-1.0

PROJECT NUMBER:
18001OCG

DATE:
04/01/19



PROJECT NOTES:

OWNER / DEVELOPER:
Oconee County Government
23 N. Main Street
Watkinsville, Ga. 30677
Contact: Jody Woodall, PE
Tel.: (706) 769-2939

ENGINEER:
Carter Engineering Consultants, Inc.
3651 Mars Hill Road, Suite 2000
Watkinsville, Georgia 30677
Contact: Mark Campbell, PE
Tel. (770) 725-1200
Mark@carterengineering.net

Project located at Mars Hill Road Intersection And Malcom Bridge Rd.

Boundary and topographical information obtained from field run survey by Carter Engineering Consultants, Inc. dated: March 21, 2019. Phone: (770) 725-1200

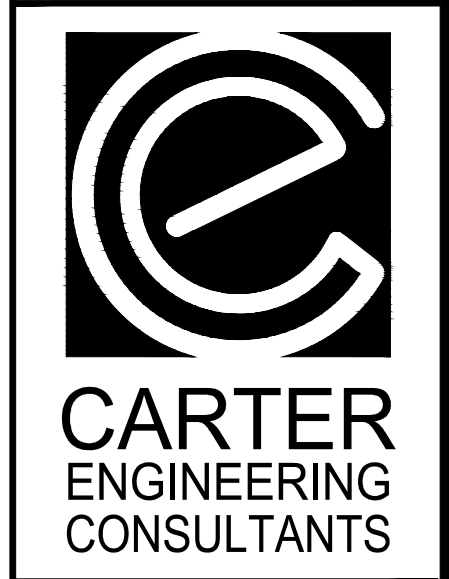
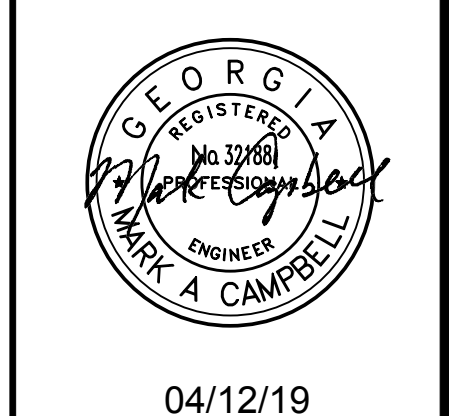
Contour interval is 1 foot (NAVD 88)

The project shown hereon lies with Zone X and does not lie within a 100 year flood plain according to Flood Insurance Rate Map #13219C0045D dated: September 2, 2009.

GENERAL NOTES:

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REVISION BLOCK:	REV. #	DATE	REVISION
	A	01/19/2019	INITIAL REVIEW
	B	03/19/2019	90% SUBMITTAL
	C	04/01/2019	ISSUE FOR REVIEW
	D	04/12/2019	CONTRACTOR BID



Carter Engineering Consultants, Inc.
3651 Mars Hill Road, Suite 2000
Watkinsville, GA 30677
P: 770.725.1200
F: 770.725.1204
www.carterengineering.net

ROUNDABOUT PLANS
for
OCONEE COUNTY GOVERNMENT
MARS HILL ROAD INTERSECTION AND MALCOM BRIDGE RD.

PROJECT NAME:
ROUNDABOUT PLANS

SHEET TITLE:
LANDSCAPE PLAN

SHEET NUMBER:
L-1.2

PROJECT NUMBER:
18001OCG

DATE:
04/01/19

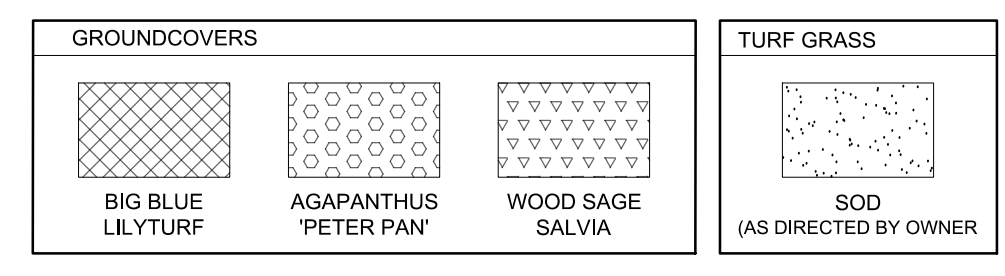
- N/F POWER FAMILY PARTNERSHIP, LLLP**
TAX PARCEL # B 02J 024
D.B. 1169, P. 130 -and- P.B. 24, P. 268
ZONING: B-2
- (3) MAIDEN GRASS
 - (7) DOUBLE KNOCKOUT ROSE
 - (4) EMERALD SNOW LOROPETALUM
 - (5) PURPLE DAYDREAM LOROPETALUM
 - (3) MAIDEN GRASS
 - (7) DOUBLE KNOCKOUT ROSE
 - (3) MAIDEN GRASS
 - (7) DOUBLE KNOCKOUT ROSE
 - (3) MAIDEN GRASS
 - (2,770 sf) SOD - AS DIRECTED BY OWNER
- N/F POWER FAMILY PARTNERSHIP, LLLP**
TAX PARCEL # B 02J 001
D.B. 1169, P. 130 -and- P.B. 24, P. 268
ZONING: B-2
- (7) MAIDEN GRASS
 - (3,300 sf) SOD - AS DIRECTED BY OWNER
 - (3) MAIDEN GRASS
 - (7) DOUBLE KNOCKOUT ROSE
 - (9) DWARF BURFORD HOLLY
 - (3) MAIDEN GRASS
 - (3) MAIDEN GRASS
 - (22) 'STELLA DE ORO' DAYLILY
 - (25) PEACH DRIFT ROSE
 - (26) DWARF YAUPON HOLLY
 - (9) CREEPING GARDENIA
 - (24) PEACH DRIFT ROSE
 - (10) PURPLE DAYDREAM LOROPETALUM
 - (3) MAIDEN GRASS
 - (24) EMERALD SNOW LOROPETALUM
 - (11) DOUBLE KNOCKOUT ROSE
 - (330 sf) AGAPANTHUS 'PETER PAN'
 - (170 sf) 'BIG BLUE' CREEPING LILYTURF

PROVIDE LANDSCAPE EDGING FOR ALL GROUNDCOVER AND ROCK EDGING. MULCH ALL BEDS.

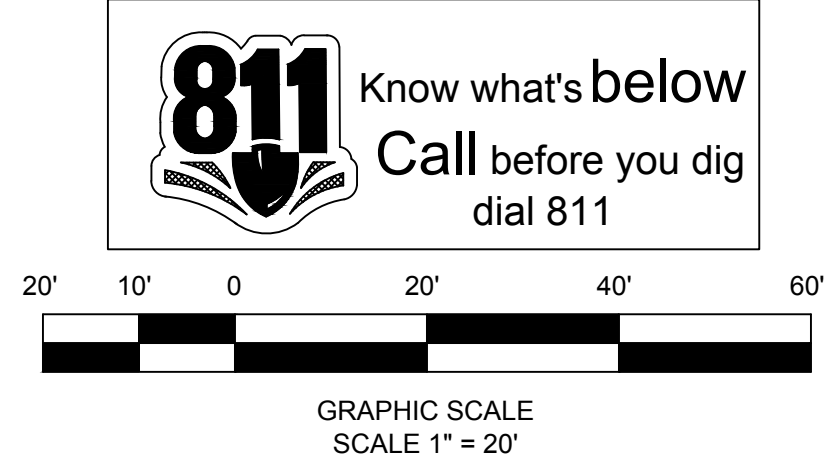
- N/F SHIRLEY ANN CROWE KENNEDY -and- LINDA CAROL CROWE PORTERFIELD -and- JAMES ALLEN CROWE**
TAX PARCEL # B 02 064A
D.B. 571, P. 180 -and- P.B. 32, P. 277
ZONING: A-1
- (3) ALLEE LACEBARK ELM
 - (10) PURPLE DAYDREAM LOROPETALUM
 - (9) CREEPING GARDENIA
 - (24) PEACH DRIFT ROSE
- *(NOTE: D.B. 647, P. 244 -and- P.B. 7, P. 75 FOR TAX PARCEL # B 02 091C ALSO INCLUDES THIS PARCEL - CAUSING AN OVERLAP)

- N/F JUDITH S. ROBERTS**
TAX PARCEL # B 02 091C
D.B. 647, P. 244 -and- P.B. 7, P. 75
ZONING: A-1
- (3) MAIDEN GRASS
 - (3) MAIDEN GRASS
 - (14) DWARF BURFORD HOLLY
 - (3) MAIDEN GRASS
 - (7) DOUBLE KNOCKOUT ROSE
 - (4) EMERALD SNOW LOROPETALUM
 - (5) PURPLE DAYDREAM LOROPETALUM
 - (7) DOUBLE KNOCKOUT ROSE
 - (4) EMERALD SNOW LOROPETALUM
 - (5) PURPLE DAYDREAM LOROPETALUM
 - (7) DOUBLE KNOCKOUT ROSE
 - (7) DOUBLE KNOCKOUT ROSE
 - (7) MAIDEN GRASS
 - (7) MAIDEN GRASS
 - (3) MAIDEN GRASS

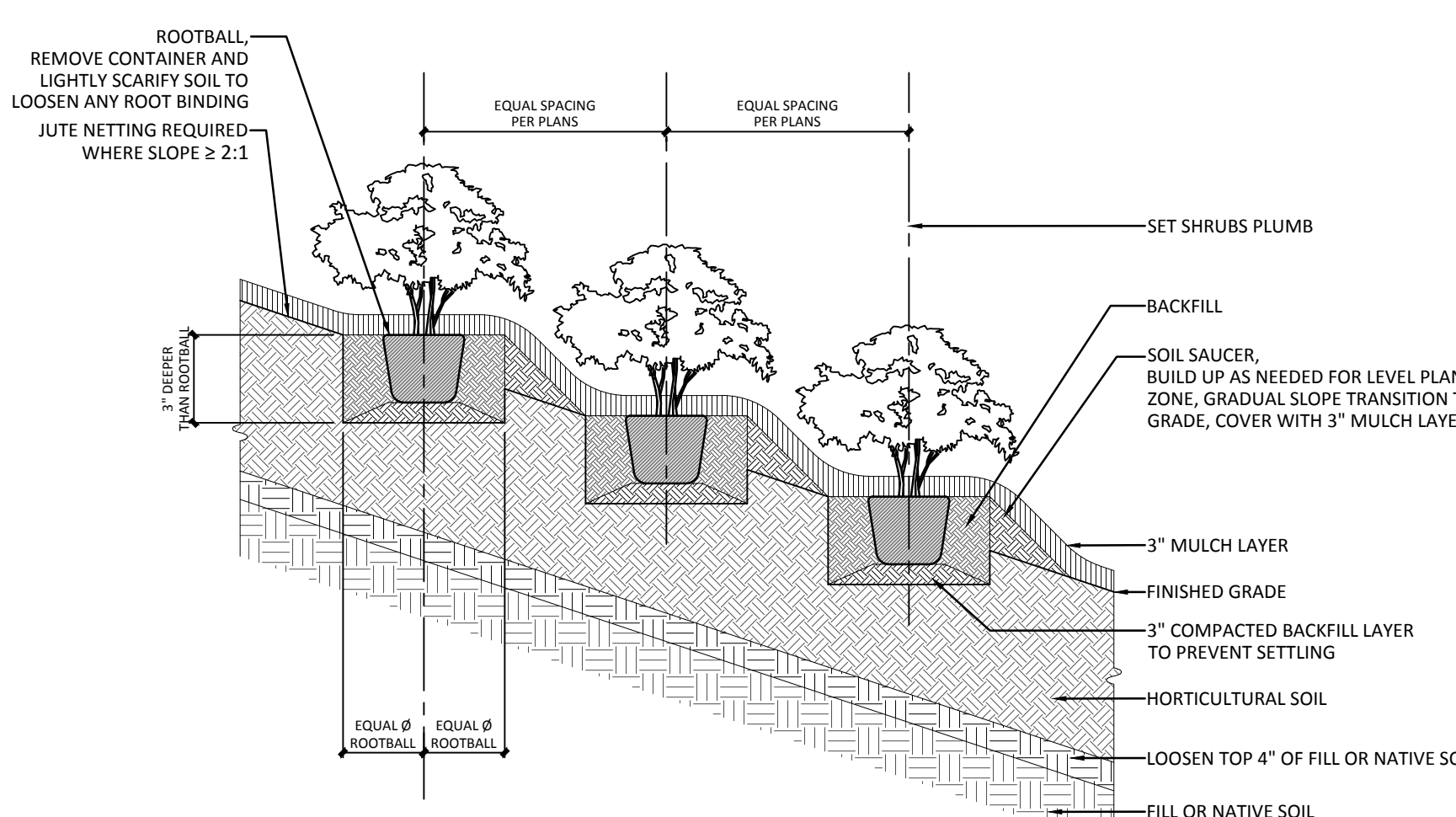
GROUNDCOVER SPACING & QUANTITY	
PLANT SPACING	PLANT SPACING MULTIPLIER (PLANTS PER SF)
12"	1.15
15"	.74
18"	.51
24"	.29



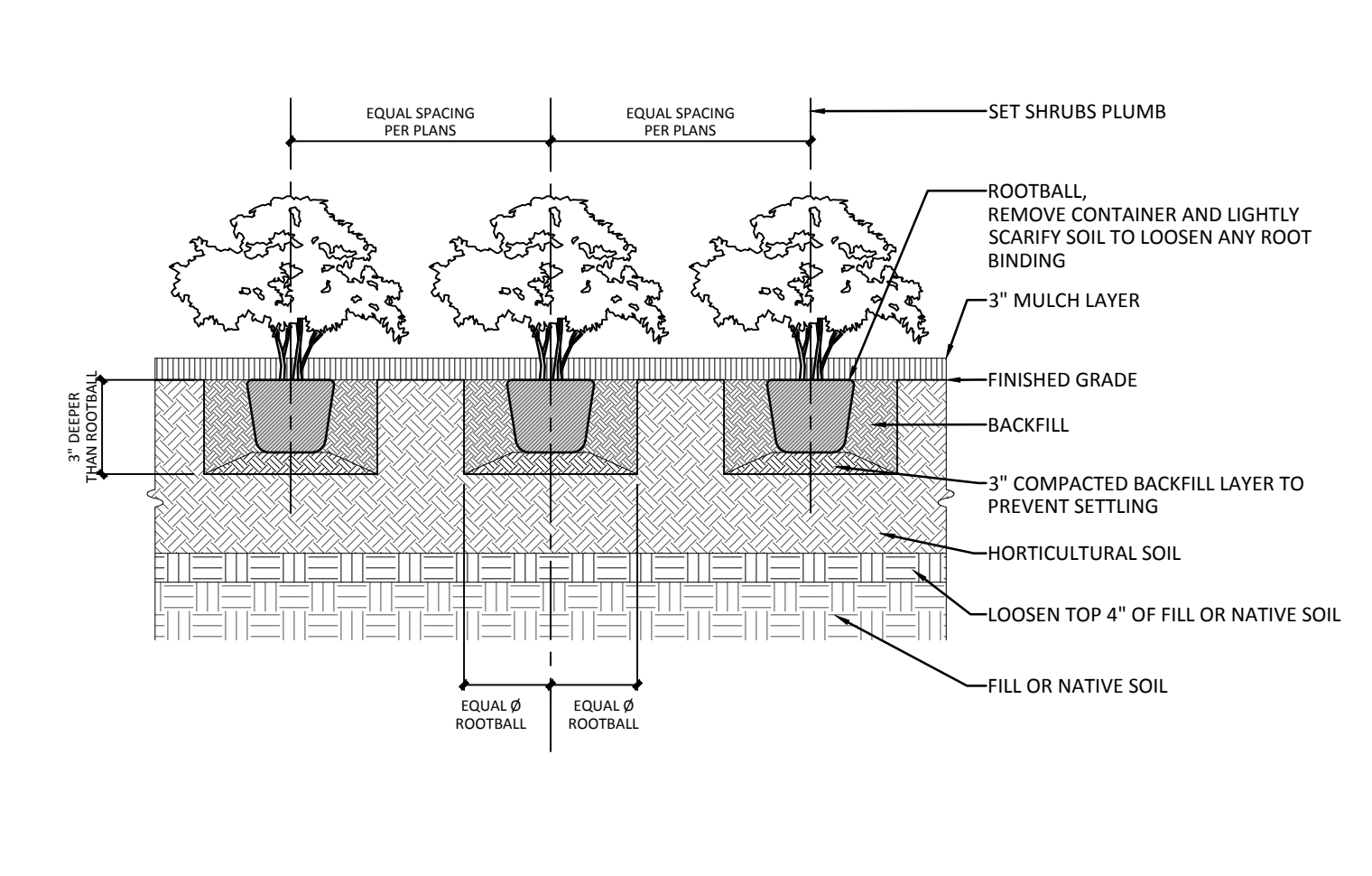
TOTAL QTY	BOTANICAL NAME	COMMON NAME	CAL./GAL.	SPACING	TYPE	HT./SPR. MINIMUM	REMARKS
CANOPY TREES							
3	<i>Ulmus parvifolia 'Emer II'</i>	Allee Lacebark Elm	4" Cal.	As Shown	B & B	14' / 6'	Straight Central Leader to Min. 6' HL, Well Spaced Branches, Symmetrical Crown (Select Trees)
EVERGREEN SHRUBS							
18	<i>Gardenia jasminoides 'Radicans'</i>	Creeping Gardenia	3 Gal.	As Shown	Container	12" / 18"	Full Pot, Well Shaped
51	<i>Ilex cornuta 'Burfordii Nano'</i>	Dwarf Burford Holly	3 Gal.	As Shown	Container	24" / 24"	Full Pot, Well Shaped
26	<i>Ilex verticillata 'Stella de Oro'</i>	Dwarf Yaupon Holly	3 Gal.	As Shown	Container	18" / 18"	Full Pot, Well Shaped
40	<i>Loropetalum chinense 'Shang White'</i>	Emerald Snow Loropetalum	3 Gal.	As Shown	Container	18" / 18"	Full Pot, Well Shaped
40	<i>Loropetalum chinense '99P 9925472'</i>	Purple Daydream Loropetalum	3 Gal.	As Shown	Container	18" / 18"	Full Pot, Well Shaped
DECIDUOUS SHRUBS							
22	<i>Hemerocallis 'Stella de Oro'</i>	Stella de Oro Daylily	1 Gal.	As Shown	Container	18" / 18"	Full Pot, Well Shaped
94	<i>Miscanthus sinensis 'Gracillimus'</i>	Maiden Grass	3 Gal.	As Shown	Container	24" / 18"	Full Pot, Well Shaped
73	<i>Rosa 'Maggie'</i>	Peach Drift Rose	3 Gal.	As Shown	Container	18" / 18"	Full Pot, Well Shaped
95	<i>Rosa x Radrazo</i>	Double Knockout Rose	3 Gal.	As Shown	Container	18" / 18"	Full Pot, Well Shaped
GROUNDCOVERS (in square feet)							
330	<i>Agapanthus africanus 'Peter Pan'</i>	Peter Pan African Lily	1 Gal.	12" O.C.	Container	12" / 12"	Full Pot, Well Shaped
170	<i>Liriope muscari 'Big Blue'</i>	Big Blue Creeping Lilyturf	1 Gal.	18" O.C.	Container	12" / 12"	Full Pot, Well Shaped
TURF GRASS (in square feet)							
0	<i>River Rock (2-5" Rocks)</i>	River Rock (2-5" Rocks)	---	---	ROCK	---	---
15,420	<i>Sod (as directed by owner)</i>	Sod (as directed by owner)	---	---	SOD	---	---



ROUNDBOUT - MASTER PLANT SCHEDULE									
TOTAL QTY	BOTANICAL NAME	COMMON NAME	CAL./GAL.	SPACING	TYPE	HT./SPR. MINIMUM	REMARKS		
CANOPY TREES									
4	<i>Quercus natalli</i> 'QNSTC'	Esplanade Nuttall Oak	4" Gal.	As Shown	B & B	14' / 6'	Straight Central Leader to Min. 6' Ht., Well Spaced Branches, Symmetrical Crown (Select Trees)		
3	<i>Ulmus parvifolia</i> 'Emer II'	Allen Lacebark Elm	4" Gal.	As Shown	B & B	14' / 6'	Straight Central Leader to Min. 6' Ht., Well Spaced Branches, Symmetrical Crown (Select Trees)		
UNDERSTORY/FLOWERING TREES									
4	<i>Magnolia x soulangeana</i> 'Jane'	Jane® Saucer Magnolia	2" (Multi.)	As Shown	B & B	10' / 5'	Multi-stem (3) Clear to 5' Ht., Heavy Canopy, Well Spaced Branches, Symmetrical Crown		
EVERGREEN SHRUBS									
55	<i>Gardenia jasminodes</i> 'Radicans'	Creeping Gardenia	3 Gal.	As Shown	Container	12" / 18"	Full Pot, Well Shaped		
77	<i>Ilex cornuta</i> 'Burfordii Nana'	Dwarf Burford Holly	3 Gal.	As Shown	Container	24" / 24"	Full Pot, Well Shaped		
6	<i>Ilex cornuta</i> 'Newellii'	Newellii Holly	3 Gal.	As Shown	Container	18" / 18"	Full Pot, Well Shaped		
78	<i>Ilex vomitoria</i> 'Stokes' Dwarf'	Dwarf Yaupon Holly	3 Gal.	As Shown	Container	18" / 18"	Full Pot, Well Shaped		
40	<i>Loropetalum chinense</i> 'Shang White'	Emerald Snow Loropetalum	3 Gal.	As Shown	Container	18" / 18"	Full Pot, Well Shaped		
81	<i>Loropetalum chinense</i> 'PPY PR25471'	Purple Daydream Loropetalum	3 Gal.	As Shown	Container	18" / 18"	Full Pot, Well Shaped		
DECIDUOUS SHRUBS									
87	<i>Hemerocallis</i> 'Stella de Oro'	Stella de Oro Daylily	1 Gal.	As Shown	Container	18" / 18"	Full Pot, Well Shaped		
170	<i>Miscanthus sinensis</i> 'Gracillimus'	Maiden Grass	3 Gal.	As Shown	Container	24" / 18"	Full Pot, Well Shaped		
0	<i>Pennisetum alluopuriodes</i> 'Hamelin'	Hamelin Fountain Grass	3 Gal.	As Shown	Container	18" / 12"	Full Pot, Well Shaped		
123	<i>Rosa</i> 'Maggi'	Heath Drift Rose	3 Gal.	As Shown	Container	18" / 18"	Full Pot, Well Shaped		
179	<i>Rosa x Radia</i>	Double Knockout Rose	3 Gal.	As Shown	Container	18" / 18"	Full Pot, Well Shaped		
GROUNDCOVERS (in square feet)									
595	<i>Agapanthus africanus</i> 'Peter Pan'	Peter Pan® African Lily	1 Gal.	12" O.C.	Container	12" / 12"	Full Pot, Well Shaped		
815	<i>Liriope muscaria</i> 'Big Blue'	Big Blue® Creeping Lilyturf	1 Gal.	18" O.C.	Container	12" / 12"	Full Pot, Well Shaped		
140	<i>Salvia x sylvestris</i> 'Mauveacho' MAY NIGHT	Wood Sage Salvia	1 Gal.	12" O.C.	Container	6" / 6"	Full Pot, Well Shaped		
TURF GRASS (in square feet)									
0	River Rock (2.5" Rocks)	River Rock (2.5" Rocks)	---	---	ROCK	---	---		
28,840	Sod (as directed by owner)	Sod (as directed by owner)	---	---	SOD	---	---		



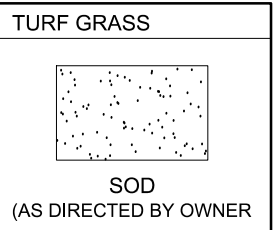
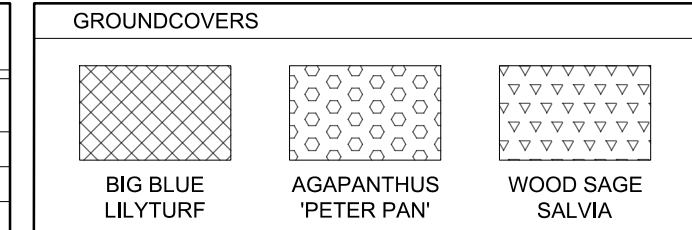
SHRUB PLANTING ON A SLOPE



SHRUB PLANTING AT LANDSCAPE

1 SHRUB PLANTING DETAILS
 $\frac{3}{4}" = 1'-0"$

GROUND COVER SPACING & QUANTITY		
PLANT SPACING	PLANT SPACING MULTIPLIER (PLANTS PER SF)	
12"	1.15	
15"	.74	
18"	.51	
24"	.29	

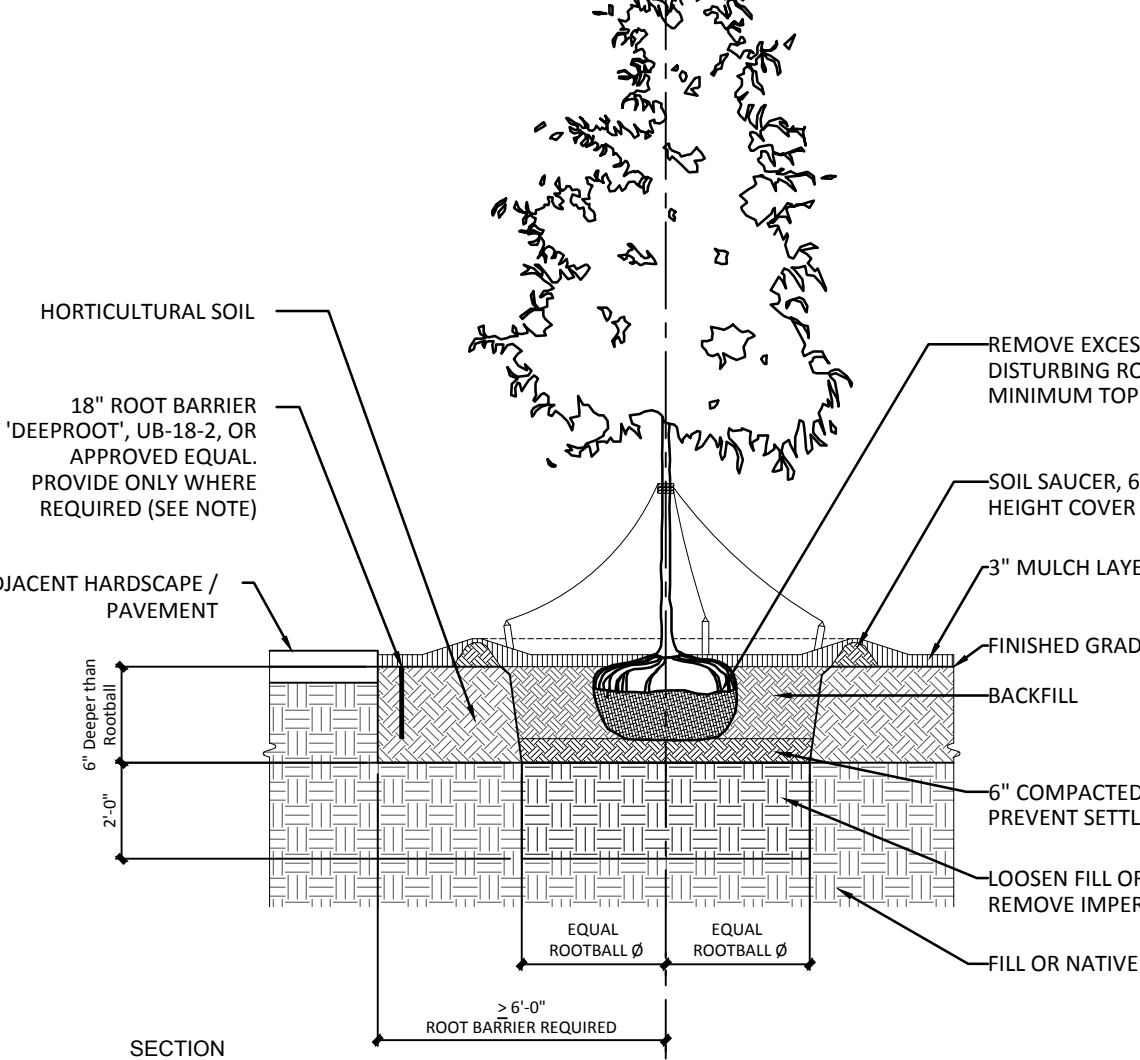
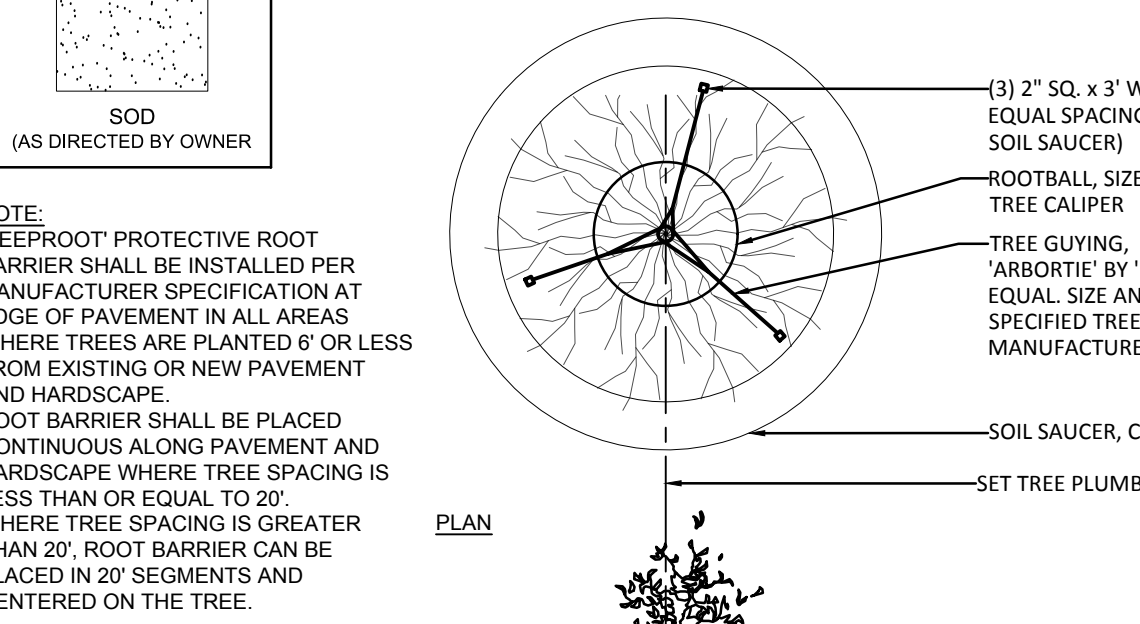


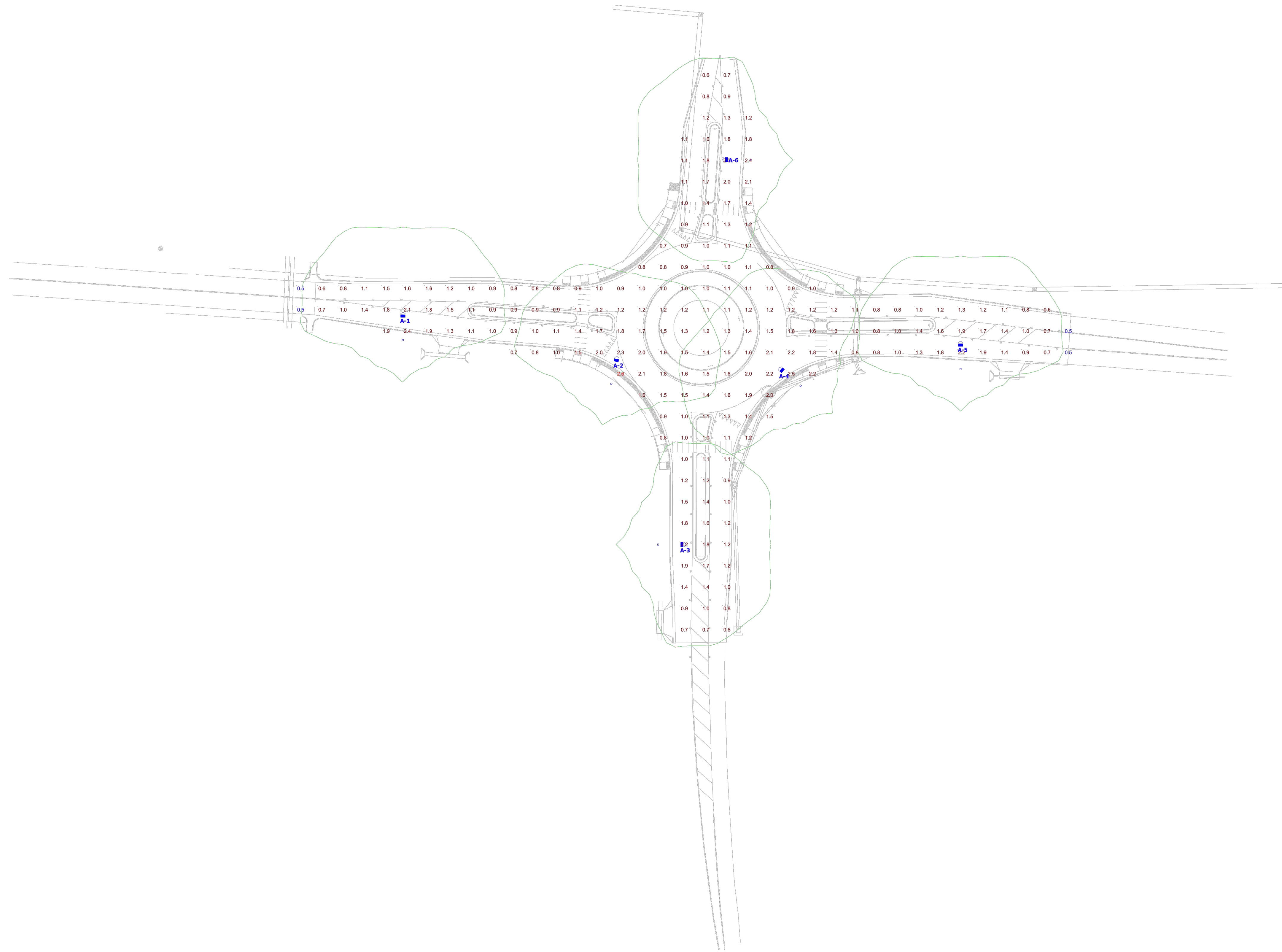
GENERAL LANDSCAPE NOTES:

- Landscaping shown on this plan shall be maintained in compliance with county and/or city landscape ordinance.
- All disturbed ground shall have ground cover or mulch and/or grassing.
- Trees selected for planting must be free from injury, pests, disease, nutritional disorders or root defects, and must be of good vigor, so as to assure a reasonable expectation of survivability.
- Plants that are diseased, unsurvivably damaged or are dead shall be removed and replaced with a plant of the same species, variety, and cultivar, as acceptable to the code enforcement director.
- Other landscape materials shall be maintained in proper repair and shall be kept clear of refuse and debris.
- Anchor tie or similar nylon tree strapping/guying material shall not be used in a way that will girdle tree trunks if left in place.

PLANTING NOTES:

- THE CONTRACTOR SHALL LOCATE AND VERIFY ALL EXISTING AND NEW UTILITY LINE LOCATIONS PRIOR TO PLANTING AND SHALL REPORT ANY CONFLICTS TO THE LANDSCAPE ARCHITECT. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE PROTECTION OF ALL UNDERGROUND UTILITIES DURING THE LIFE OF THE PROJECT.
- THE CONTRACTOR IS RESPONSIBLE FOR REPAIR OF ANY DAMAGE INCURRED DURING THE EXECUTION OF HIS WORK.
- THE CONTRACTOR SHALL STAKE ALL TREE LOCATIONS IN THE FIELD AND THE STAKED LOCATIONS SHALL BE REVIEWED AND APPROVED BY CARTER ENGINEERING. CARTER ENGINEERING MAY MAKE MINOR ADJUSTMENTS TO THE LAYOUT WITHOUT INCURRING ADDITIONAL COSTS TO THE PROJECT.
- MULCH ALL PLANT AREAS FOR TREES AND SHRUBS WITH 3" LAYER OF DOUBLE GROUND SHREDDED HARDWOOD MULCH.
- ANY PROPOSED SUBSTITUTIONS OF PLANT SPECIES WILL BE WITH PLANTS WITH EQUIVALENT OVERALL FORM, HEIGHT, BRANCHING HABIT, FLOWER COLOR, LEAF COLOR, FRUIT COLOR, AND TIME OF BLOOM, AS APPROVED BY CARTER ENGINEERING.
- SUBSTITUTIONS SHALL NOT BE MADE UNLESS DRAWINGS AND/OR WRITTEN REQUESTS ARE SUBMITTED TO CARTER ENGINEERING FOR APPROVAL. CARTER ENGINEERING SHALL DETERMINE EQUALITY BASED UPON COMPLETE INFORMATION SUBMITTED BY THE CONTRACTOR.
- TREES: PROVIDE SPECIMEN BALLED AND BURLAPPED, OR AS SPECIFIED. TREES OF HEIGHT, SIZE, CALIPER, GENUS, SPECIES, CULTIVAR AND BRANCHING CONFIGURATION INDICATED. THE ROOT SYSTEM OF EACH SHALL BE WELL PROVIDED WITH FIBROUS ROOTS. ALL PARTS OF PLANT SHALL BE MOIST AND SHOW ACTIVE GREEN CAMBIUM WHEN CUT. THEY SHALL BE FREE OF DISEASE, INSECT PESTS, EGGS OR LARVAE. ALL PLANTS TO BE MOVED BALLED AND BURLAPPED, MUST BE MOVED WITH THE ROOT SYSTEMS AS SOLID UNITS WITH BALLS OF EARTH FIRMLY WRAPPED WITH UNTREATED BURLAP. FIRMLY HELD IN PLACE BY A STOUT CORD OR WIRE, OR IN CONTAINERS.
- PRUNING AND SHAPING: PRUNE, THIN OUT, AND SHAPE PLANTS IN COMPLIANCE WITH AMERICAN HORT'S AMERICAN STANDARD FOR NURSERY STOCK TO PRESERVE THE NATURAL CHARACTER AND ONLY AS APPROVED BY CARTER ENGINEERING DESIGN TEAM. RETAIN REQUIRED HEIGHT AND SPREAD, DO NOT ALTER SHAPE AND DO NOT CUT LEADERS, REMOVE ALL DEAD WOOD, SUCKERS, BROKEN OR BRUISED BRANCHES, AND CROSSING BRANCHES.
- STAKES AND GUYING: TO BE ROUND CEDAR POSTS.
- THE CARTER ENGINEERING REPRESENTATIVE RESERVES THE RIGHT TO REJECT PLANT MATERIAL AT THE NURSERY OR AT THE SITE.
- THE TRUNK FLARE (AT THE BASE OF THE TREE) SHALL BE PROPERLY EXPOSED FOR ALL PLANTINGS.
- KEEP ROOT BALLS INTACT PRIOR TO AND DURING PLANTING OPERATIONS. PLANTS WITH BROKEN OR DAMAGED ROOT BALLS SHALL BE REJECTED AND IMMEDIATELY REMOVED FROM THE SITE. KEEP ROOT BALLS DAMP AND PROTECTED FROM DAMAGE DUE TO SUN AND WIND. DO NOT SHAVE ROOT BALLS.
- PLANT SOIL MIXTURE WILL BE USED TO BACKFILL THE PLANTING AREA. INSTALL PLANTS SIMULTANEOUSLY WITH INSTALLATION OF PLANTING SOIL MIXES.
- TREE PLANTING: SEE TREE PLANTING DETAIL AND SPECIFICATION NOTES HEREIN FOR ADDITIONAL INFORMATION RELATED TO PLANTING PIT DIMENSIONS, PLANTING OPERATIONS, BACKFILLING, AND STAKING OF TREES.
- CONTAINER STOCK PLANTING: PLANT CONTAINER GROWN STOCK THE SAME AS SPECIFIED FOR BALLED AND BURLAPPED STOCK, BUT REMOVE CONTAINERS COMPLETELY.
- SOIL SHALL BE FREE OF ALL DEBRIS, CONSTRUCTION MATERIAL, AND SLURRY. LANDSCAPE AREAS SHALL BE BACKFILLED WITH PLANTING SOIL MIXTURE PER DETAILS AND SPECIFICATIONS.
- OBSTRUCTIONS: IF OBSTRUCTIONS OR OTHER CONDITIONS DETRIMENTAL TO HEALTHY PLANT GROWTH ARE ENCOUNTERED, NOTIFY CARTER ENGINEERING IMMEDIATELY AND REQUEST ADDITIONAL INSTRUCTIONS.
- WATERING AND DRAINAGE: FILL EXCAVATIONS WITH WATER AND ALLOW WATER TO PERCOLATE OUT BEFORE PLANTING. IF PLANTING PITS DO NOT PERCOLATE OR DRAIN PROPERLY, NOTIFY THE CARTER ENGINEERING AND REQUEST ADDITIONAL INSTRUCTIONS PRIOR TO PLANTING. DO NOT PLANT INTO POORLY DRAINING PLANTING PITS. POORLY DRAINING PLANTING PITS MAY HOLD WATER AND DROWN PLANTS.
- FLOOD ALL PLANTS WITH WATER TWICE WITHIN THE FIRST 24 HOURS AFTER PLANTING. ALL PLANT MATERIAL SHALL BE MULCHED AFTER PLANTING, BACKFILL TO ALLOW ROOM FOR MULCH AFTER SETTLING, AND PLACE MULCH IN DRAINAGE FIRST WATERING AND WITHIN ONE WEEK OF PLANTING. SEE PLANTING DETAILS FOR MULCH THICKNESS.
- ALL PLANTS SHALL BE PLUMB VERTICALLY AFTER SETTLING OR AS DIRECTED BY CARTER ENGINEERING.
- PLANTING RESTRICTIONS: PLANT DURING ONE OF THE FOLLOWING PERIODS.
 - SPRING PLANTING (SHRUBS, GROUNDCOVER, PERENNIALS) - MARCH THROUGH MAY
 - FALL PLANTING (SHRUBS, GROUNDCOVER, PERENNIALS) - SEPTEMBER THROUGH NOVEMBER
 - TREE PLANTING - SEPTEMBER THROUGH APRIL
- INSTALLER AGREES TO REPAIR OR REPLACE PLANTINGS AND ACCESSORIES THAT FAIL IN MATERIALS, WORKMANSHIP OR GROWTH WITHIN 12 MONTHS OF SUBSTANTIAL COMPLETION. FAILURES INCLUDE, BUT ARE NOT LIMITED TO:
 - DEATH AND UNSATISFACTORY GROWTH, EXCEPT FOR DEFECTS RESULTING FROM THE LACK OF ADEQUATE MAINTENANCE BY OWNER.
 - STRUCTURAL FAILURES INCLUDING PLANTINGS FALLING OR BLOWING OVER.
- THE CONTRACTOR SHALL VERIFY THE PLANTING QUANTITIES LISTED IN THE PLANT LEGEND. CONTRACTOR IS RESPONSIBLE FOR INSTALLING ALL PLANTS SHOWN ON PLANTING PLANS. IN CASE OF DISCREPANCIES CARTER ENGINEERING SHOULD BE CONTACTED.
- ALL GROUND COVER QUANTITIES SHALL BE DETERMINED USING THE INFORMATION PROVIDED IN THE GROUND COVER QUANTITY AND SPACING CHART ON THIS SHEET.



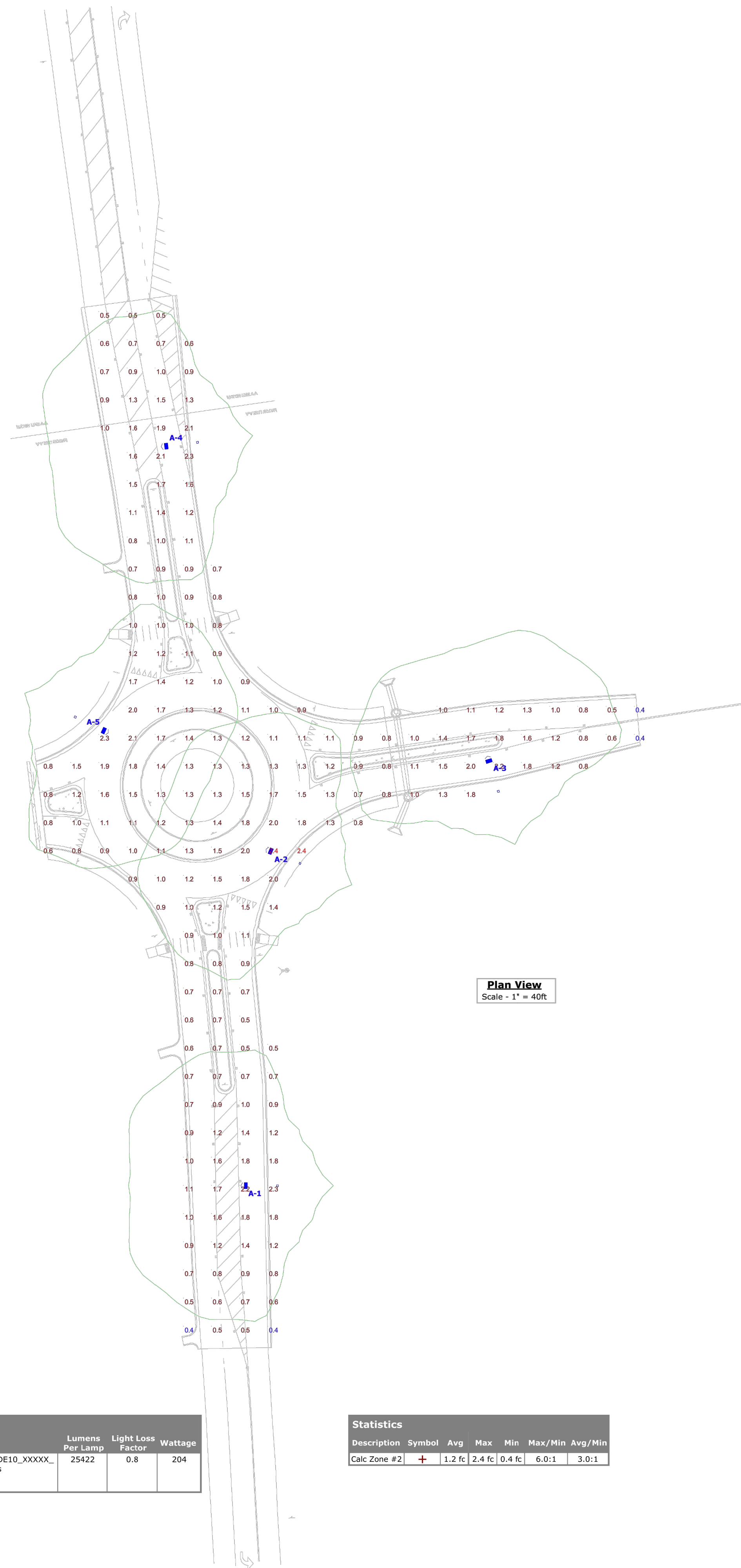


Plan View
Scale - 1" = 40ft

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
A	A	6	American Electric Lighting	ATB2 60BLEDE10 XXXXX R4 4K/5K	ATB2 SERIES LED 1000MA TYPE 4 4000K/5000K CCT	LED Array	ATB2_60BLEDE10_XXXX_R4_4K_5K.lies	25422	0.8	204

Statistics							
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min	
Calc Zone #1	+	1.3 fc	2.6 fc	0.5 fc	5.2:1	2.6:1	

Luminaire Locations						
		Location				
No.	Label	X	Y	MH	Orientation	Tilt
1	A	55.28	227.06	35.00	0.46	0.00
2	A	201.97	196.31	35.00	12.06	0.00
3	A	234.89	83.29	35.00	90.00	0.00
4	A	334.98	194.89	35.00	310.46	0.00
5	A	447.71	206.68	35.00	0.00	0.00
6	A	300.03	353.83	35.00	270.00	0.00



Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
A	A	5	American Electric Lighting	ATB2 60BLEDE10 XXXXX R4 4K/5K	ATB2 SERIES LED 1000MA TYPE 4 4000K/5000K CCT	LED Array	ATB2_60BLEDE10_XXXX_R4_4K_5K.lis	25422	0.8	204

Statistics									
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min			
Calc Zone #2	+	1.2 fc	2.4 fc	0.4 fc	6.0:1	3.0:1			

Luminaire Locations						
		Location				
No.	Label	X	Y	MH	Orientation	Tilt
1	A	137.81	111.34	35.00	270.00	0.00
2	A	149.80	282.85	35.00	292.62	0.00
3	A	255.27	321.20	35.00	342.76	0.00
4	A	95.26	506.94	35.00	263.12	0.00
5	A	29.94	360.75	35.00	115.30	0.00