INDIAN HUT ROAD / AMOS ROAD EXTENSION

PAVING IMPROVEMENTS

FOR

GEORGETOWN COUNTY

SHEET INDEX

SHEET NO.	DESCRIPTION	TOTAL
1	TITLE SHEET	1
2	QUANTITY SHEET	1
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5	ALIGNMENT & CONTROL SHEET	1
6-19	PLAN & PROFILE	14
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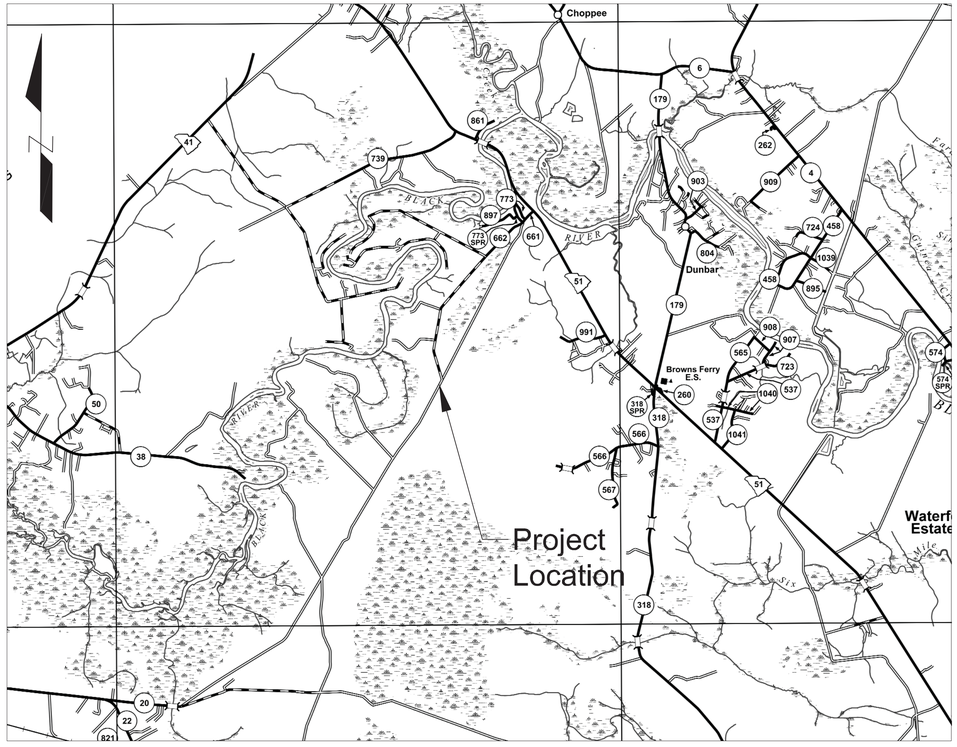
PUPS
PALMETTO UTILITY PROTECTION SERVICES INC

Please Call
Palmetto Utility Protection Service
1-888-721-7877
72 Hours Prior to Beginning Construction

Design Reference for these plans is the:
"Georgetown County Roadway Design & Construction Manual", 2014



Vicinity Map
Scale: 1" = 5000'

NET LENGTH OF ROADWAY	2.29	MILES
NET LENGTH OF BRIDGES	0	MILES
NET LENGTH OF PROJECT	2.29	MILES
LENGTH OF EXCEPTIONS	0	MILES
GROSS LENGTH OF PROJECT	2.29	MILES

General Notes:

1. An encroachment permit from the Georgetown County Public Services Department is required prior to commencing work with County right-of-way, or drainage easements.
2. Any work within State right-of-way will require a SCDOT Encroachment Permit.
3. The contractor shall notify the Georgetown County Public Works Division at least 24 hours prior to starting construction within the right-of-way.
4. The contractor shall provide all signs, barricades, flagmen, lights or other devices necessary for safe traffic control in accordance with the current edition of the Manual on Uniform Traffic Control Devices as modified by the South Carolina Supplement to the MUTCD. A traffic control plan shall be submitted to and approved by the Georgetown County Public Works Division prior to the issuance of any construction permit for work within County right-of-way.
5. The contractor shall contact South Carolina 811 (sc1pups.org / 1-888-721-7877) at least 72 working day hours prior to construction, and request utility locates.
6. Construction specification: Shall comply with the latest edition of the South Carolina Department of Transportation Standard Specifications for Road and Bridge Construction, special provisions and revisions thereto, and as amended by Chapter 5 of the Georgetown County Roadway Design and Construction Manual.
7. The subgrade material shall be scarified or removed to a depth required by Georgetown County according to information obtained from laboratory tests and/or as required in the Pavement Design Report. Additives or approved material may be required if the native material is unsatisfactory. The subgrade shall be compacted to a minimum density determined in accordance with AASHTO designation T180 or T99 and in accordance with the SCDOT Standard Specifications Section 208 (current editions).
8. Service trenches and utility main trenches shall be compacted throughout the depth of trench.
9. Class 6 aggregate base course for shoulders shall be placed and compacted to 95% Standard Proctor after placement of asphalt.
10. Existing asphalt pavement shall be straight saw cut or blade cut when adjoining with new asphalt pavement. SS-1 tack coat shall be applied to all surfaces.
11. Structural section shall be as approved by the Georgetown County Public Works Division, with pavement design in accordance with the Georgetown County Roadway Design and Construction Manual.

NPDES PERMIT INFORMATION
Disturbed Area = 7.6 Acre(s) Total Area = 16.0 Acre(s)
Approximate Location of Roadway is Latitude 33° 30' 5" Longitude 79° 24' 41"

I HAVE PLACED MY SIGNATURE AND SEAL ON THE DESIGN DOCUMENTS SUBMITTED SIGNIFYING THAT I ACCEPT RESPONSIBILITY FOR THE DESIGN OF THE SYSTEM. FURTHER, I CERTIFY TO THE BEST OF MY KNOWLEDGE AND BELIEF THAT THE DESIGN IS CONSISTENT WITH THE REQUIREMENTS OF TITLE 48, CHAPTER 14 OF THE CODE OF LAWS OF SC, 1976 AS AMENDED, PURSUANT TO REGULATION 72-300 ET SEQ. (IF APPLICABLE), AND IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF SCR100000.

NOTE: EXCEPT AS MAY OTHERWISE BE SPECIFIED ON THE PLANS OR IN SPECIAL PROVISIONS, ALL MATERIALS AND WORKMANSHIP ON THIS PROJECT SHALL CONFORM TO THE SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (2007 EDITION) AND THE STANDARD DRAWINGS FOR ROAD CONSTRUCTION IN EFFECT AT THE TIME OF LETTING.

ISSUE DATE: 11/05/2020 | CONSTR: | BIDS: | PERMITS:

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SOUTH CAROLINA PROFESSIONAL ENGINEER No. 32702 MATTHEW THOMAS HINES

SOUTH CAROLINA DENNIS CORPORATION NO. 3103 CERTIFICATE OF AUTHORIZATION

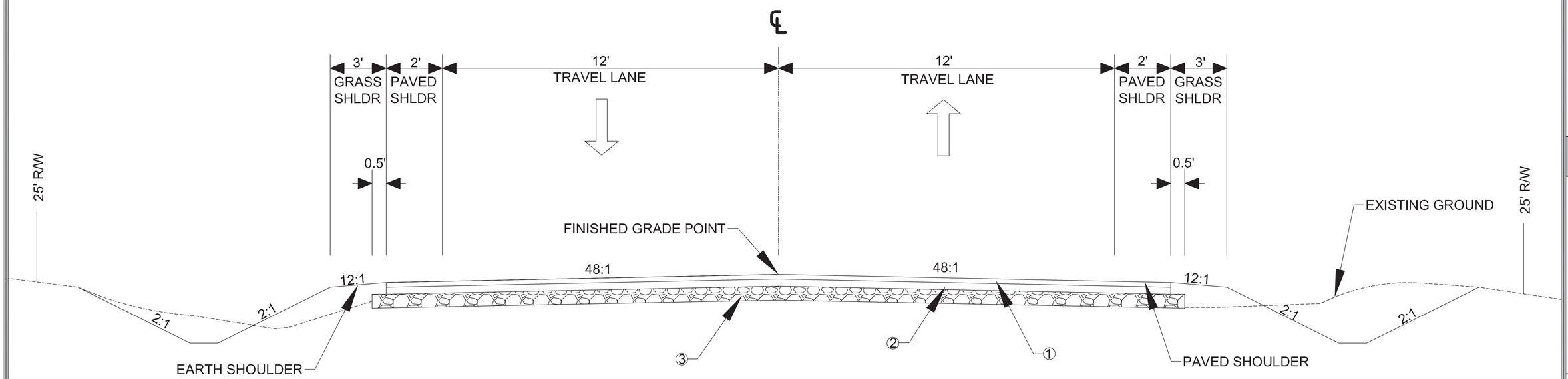
ENGINEER	DESIGNER	CHECKED
D. HAMRICK	S. SAUNDERS	M. HINES

DENNIS CORPORATION
ENGINEERING | SURVEYING | CONSTRUCTION SERVICES
www.DennisCorporation.com
1800 Huger Street
Columbia, SC 29201
Office: (803) 252-0991
Fax: (803) 733-6787

IMPROVEMENTS TO INDIAN HUT ROAD AND AMOS ROAD FOR GEORGETOWN COUNTY
GEORGETOWN COUNTY, SOUTH CAROLINA

PROJECT ID G0004.31
SCALE AS SHOWN
SHEET 1

NOTES:
1. DITCH DEPTH AND SLOPES VARY, REFER TO CROSS SECTIONS



1. 220 PSY SURFACE COURSE TYPE B HMA (± 2")
2. 330 PSY INTERMEDIATE COURSE TYPE B HMA (± 3")
3. GRADED AGGREGATE BASE COURSE (6" UNIFORM)

TYPICAL SECTION FOR INDIAN HUT & AMOS ROAD STA. 10+87.00 - STA. 131+00.00

REFER TO CROSS-SECTIONS

ISSUE DATE: 11/05/2020
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SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER NO. 32702 MATTHEW THOMAS HINES

SOUTH CAROLINA DENNIS CORPORATION NO. 3103 CERTIFICATE OF AUTHORIZATION

ENGINEER: D. HAMRICK
DESIGNER: S. SAUNDERS
CHECKED: M. HINES

TYPICAL SECTIONS

DENNIS CORPORATION

IMPROVEMENTS TO INDIAN HUT ROAD AND AMOS ROAD FOR GEORGETOWN COUNTY

GEORGETOWN COUNTY, SOUTH CAROLINA

PROJECT ID G0004.31

SCALE N.T.S.

SHEET 3

RIGHT-OF-WAY DATA

TRACT NO	PROPERTY OWNER	TAX MAP	TOTAL TRACT	OBTAIN*				REMAINDER LEFT	REMAINDER RIGHT	DATE ACQUIRED	TYPE OF INSTRUMENT	OUTFALL DITCH PERMISSION (YES)	SLOPE PERMISSION (YES)	DRAINAGE STRUCTURE PERMISSION (YES)	EROSION CONTROL PERMISSION (YES)	ENTRANCE CONSTRUCTION PERMISSION (YES)	REMARKS
				OUTFALL ACRES	LEFT	RIGHT	TOTAL	ACRES**	ACRES**								
1	RED MOUNTAIN TIMBER CO III LLC	02-1005-002-00-00	24220.09														
2	LAWSHE EDGAR W JR	02-1002-004-00-00	25.99														
3	LAWSHEE 2005 LLC	02-1002-005-00-00	121.60														
4	LAWSHEE 2005 LLC	02-1002-006-00-00	484.00														
5	CRIBB MARVIN B JR	02-1002-006-01-00	3.00														
6	LAWSHEE 2005 LLC	02-1002-007-00-00	234.40														
7	ELLIOTT TERESA L	02-1002-007-02-00	2.60														
8	ELLIOTT TERESA L	02-1002-007-01-00	1.00														

UTILITY CONTACTS

UTILITY COMPANY	TYPE OF UTILITY	CONTACT NAME	CONTACT NUMBER
FRONTIER COMMUNICATIONS FORMERLY VERIZON	COMMUNICATIONS	ASHLEY BENTON	(843) 455-5396
SANTEE ELECTRIC COOPERATIVE INC.	POWER	CHRIS MAHONEY	(843) 761-8000
GEORGETOWN COUNTY WATER & SEWER DISTRICT	WATER / SEWER	AMANDA KIRCHMEYER	(843) 436-6167

* TOTAL OBTAIN INCLUDES HIGHLAND, MARSH AND OUTFALL DITCHES OBTAINS WILL BE SHOWN IN PARENTHESES UNDER SQUARE FEET. IN RURAL AREAS, OBTAINS MAY BE SHOWN IN ACRES ONLY. OUTFALL DITCHES WILL BE SHOWN IN ACRES ONLY.

** SHOW REMAINDER IN SQUARE FEET WHEN LESS THAN 0.25 ACRES.

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SOUTH CAROLINA DENNIS CORPORATION NO. 3103 CERTIFICATE OF AUTHORIZATION

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RIGHT-OF-WAY DATA
UTILITY CONTACTS

DENNIS CORPORATION

IMPROVEMENTS TO
INDIAN HUT ROAD AND
AMOS ROAD
FOR GEORGETOWN COUNTY
GEORGETOWN COUNTY, SOUTH CAROLINA

PROJECT ID
G0004.31

SCALE
N/A

SHEET
4

ALIGNMENT DATA

CHAIN	CURVE	LOCATION	STATION	NORTHING	EASTING	DELTA	TANGENT	LENGTH	RADIUS
IH									
	IH_1	PC	19+24.91	603546.4396	2479734.0432				
		PI	20+12.27	603621.0026	2479779.5515	1°0'4" LT	87.36'	174.71'	10000'
		PT	20+99.62	603695.9604	2479824.4068				
IH									
	IH_2	PC	30+92.11	604549.8285	2480330.3158				
		PI	34+69.67	604870.7974	2480528.7629	4°19'28" RT	377.56'	754.77'	10000'
		PT	38+46.88	605184.0505	2480739.1788				
IH									
	IH_3	PC	50+58.75	606177.1082	2481433.7730				
		PI	53+77.55	606435.3049	2481620.5653	3°39'7" RT	318.80'	637.39'	10000'
		PT	56+96.13	606687.4186	2481815.4900				
IH									
	IH_4	PC	68+14.11	607560.8636	2482513.3219				
		PI	69+09.83	607638.1473	2482569.2432	10°56'8" LT	95.72'	190.86'	1000'
		PT	70+04.97	607720.4079	2482617.5462				
IH									
	IH_5	PC	82+86.46	608855.1564	2483212.9829				
		PI	83+14.02	608879.5608	2483225.7929	0°1'54" RT	27.56'	55.12'	100000'
		PT	83+41.58	608903.9617	2483238.6096				
IH									
	IH_6	PC	99+24.22	610304.9742	2483974.7483				
		PI	103+37.90	610699.5949	2484089.2883	43°49'15" LT	413.68'	786.64'	1028.53'
		PT	107+10.86	611068.6392	2484052.4335				
AR									
	AR_1	PC	122+19.81	612518.3932	2483633.9322				
		PI	123+35.59	612632.3479	2483614.9575	26°4'36" RT	115.79'	227.56'	500'
		PT	124+47.37	612743.6733	2483621.8751				

CONTROL POINTS

#	NORTHING	EASTING	ELEVATION
1	603140.92	2479135.21	55.43
2	602991.98	2479411.65	54.88
3	610637.67	2484196.07	40.26
4	613467.87	2483731.92	48.60
5	613812.00	2483792.14	47.40

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SOUTH CAROLINA PROFESSIONAL ENGINEER No. 32702 MATTHEW THOMAS HINES 11/4/20

SOUTH CAROLINA DENNIS CORPORATION NO. 3103 CERTIFICATE OF AUTHORIZATION

ENGINEER: D. HAMRICK
DESIGNER: S. SAUNDERS
CHECKED: M. HINES

ALIGNMENT AND CONTROL SHEET

DENNIS CORPORATION

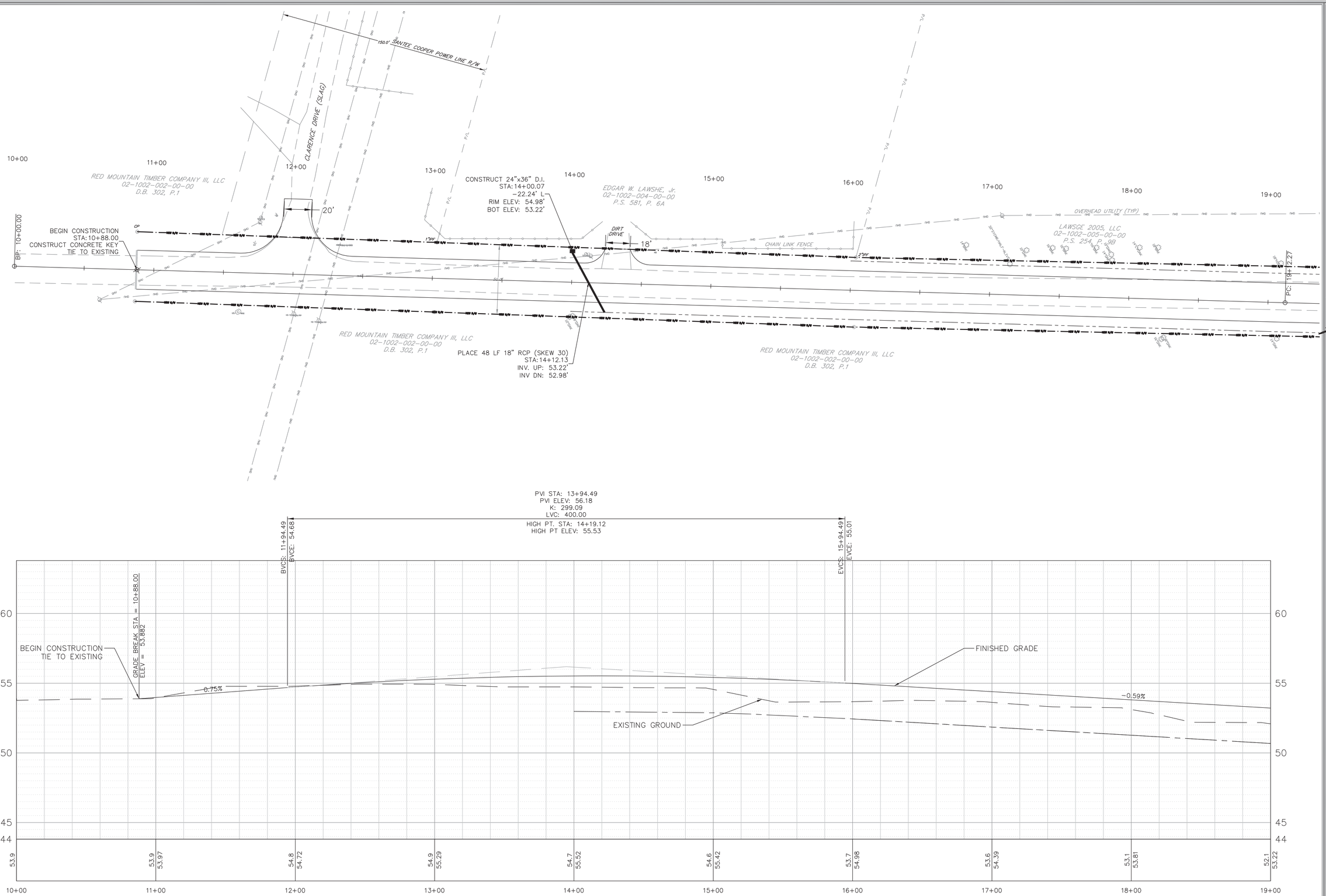
IMPROVEMENTS TO INDIAN HUT ROAD AND AMOS ROAD FOR GEORGETOWN COUNTY

GEORGETOWN COUNTY, SOUTH CAROLINA

PROJECT ID G0004.31

SCALE N/A

SHEET 5



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SOUTH CAROLINA PROFESSIONAL ENGINEER No. 32702 MATTHEW THOMAS HINES

SOUTH CAROLINA DENNIS CORPORATION NO. 3103 CERTIFICATE OF AUTHORIZATION

ENGINEER	DESIGNER	CHECKED
D. HAMRICK	S. SAUNDERS	M. HINES

DENNIS CORPORATION

PLAN & PROFILE
1 OF 14

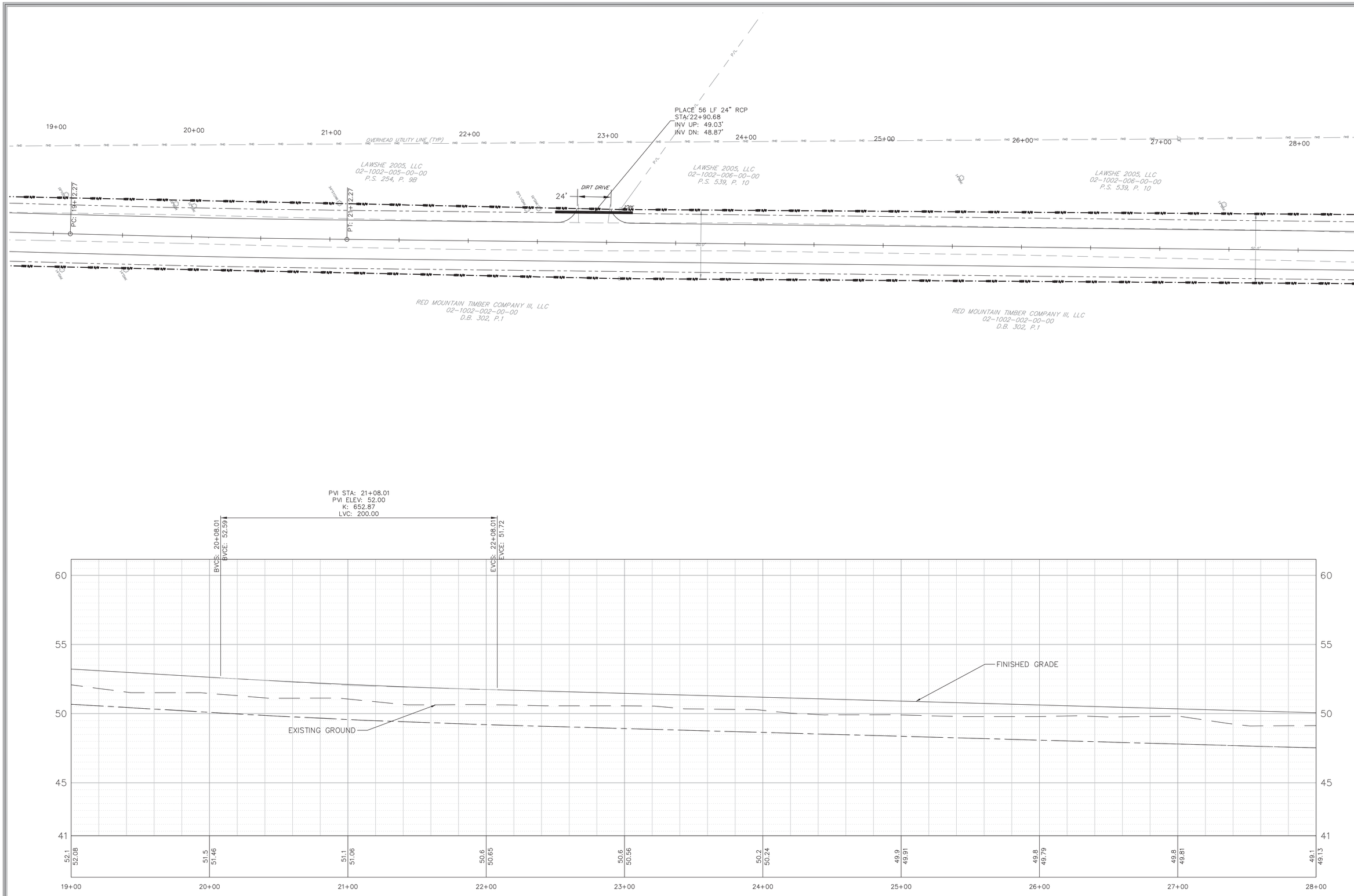
IMPROVEMENTS TO
INDIAN HUT ROAD AND
AMOS ROAD
FOR GEORGETOWN COUNTY

GEORGETOWN COUNTY, SOUTH CAROLINA

PROJECT ID
G0004.31

SCALE
1" = 30'

SHEET
6



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SOUTH CAROLINA PROFESSIONAL ENGINEER No. 32702 MATTHEW THOMAS HINES 2021-11-21

SOUTH CAROLINA DENNIS CORPORATION NO. 3103 CERTIFICATE OF AUTHORIZATION

ENGINEER	DESIGNER	CHECKED
D. HAMRICK	S. SAUNDERS	M. HINES

PLAN & PROFILE
2 OF 14

DENNIS CORPORATION

IMPROVEMENTS TO
INDIAN HUT ROAD AND
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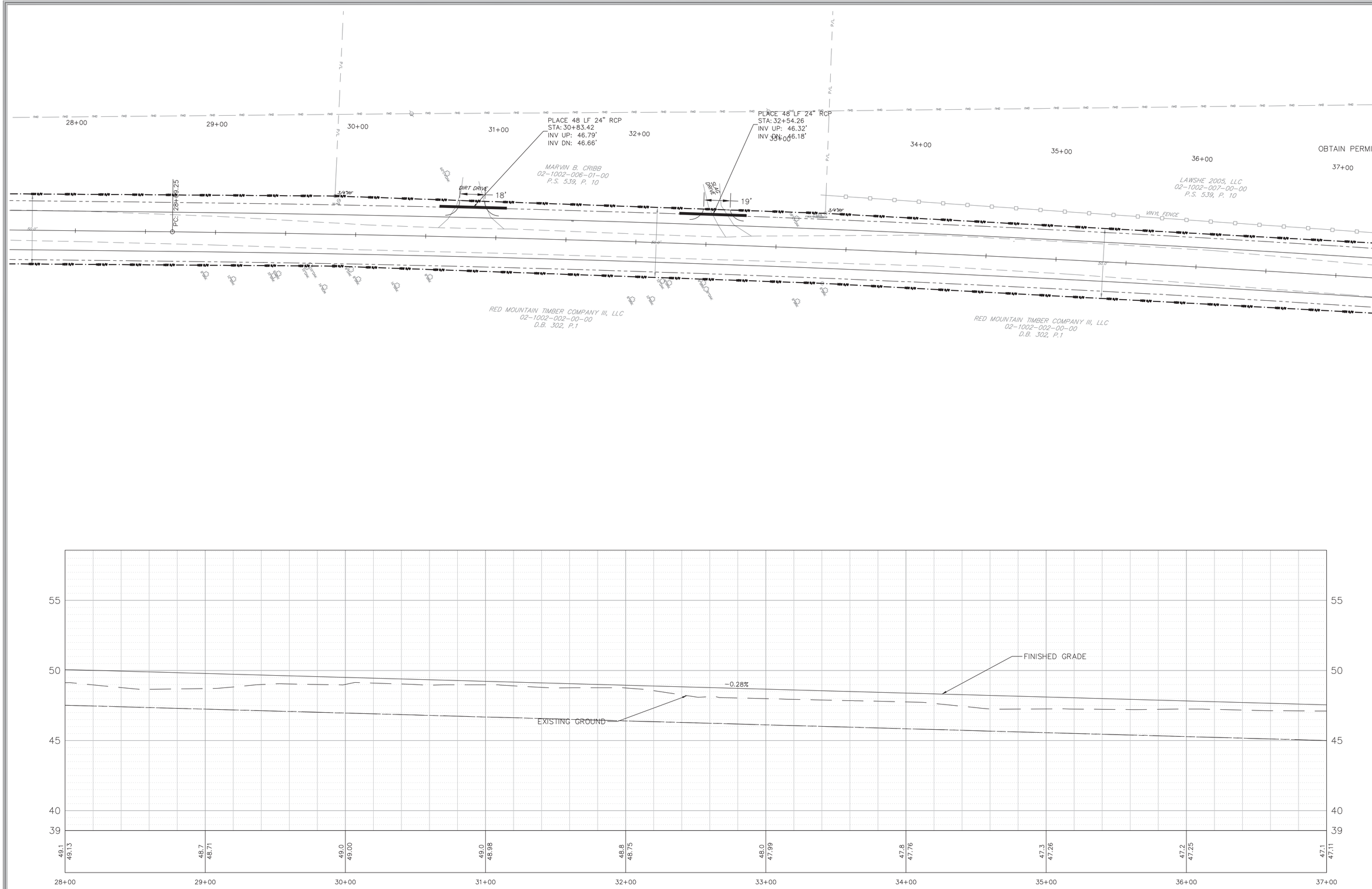
FOR GEORGETOWN COUNTY

GEORGETOWN COUNTY, SOUTH CAROLINA

PROJECT ID
G0004.31

SCALE
1" = 30'

SHEET
7



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SOUTH CAROLINA PROFESSIONAL ENGINEER No. 32702 11/11/20 MATTHEW THOMAS HINES

SOUTH CAROLINA DENNIS CORPORATION NO. 3103 CERTIFICATE OF AUTHORIZATION

ENGINEER	DESIGNER	CHECKED
D. HAMRICK	S. SAUNDERS	M. HINES

PLAN & PROFILE
3 OF 14

DENNIS CORPORATION

IMPROVEMENTS TO
INDIAN HUT ROAD AND
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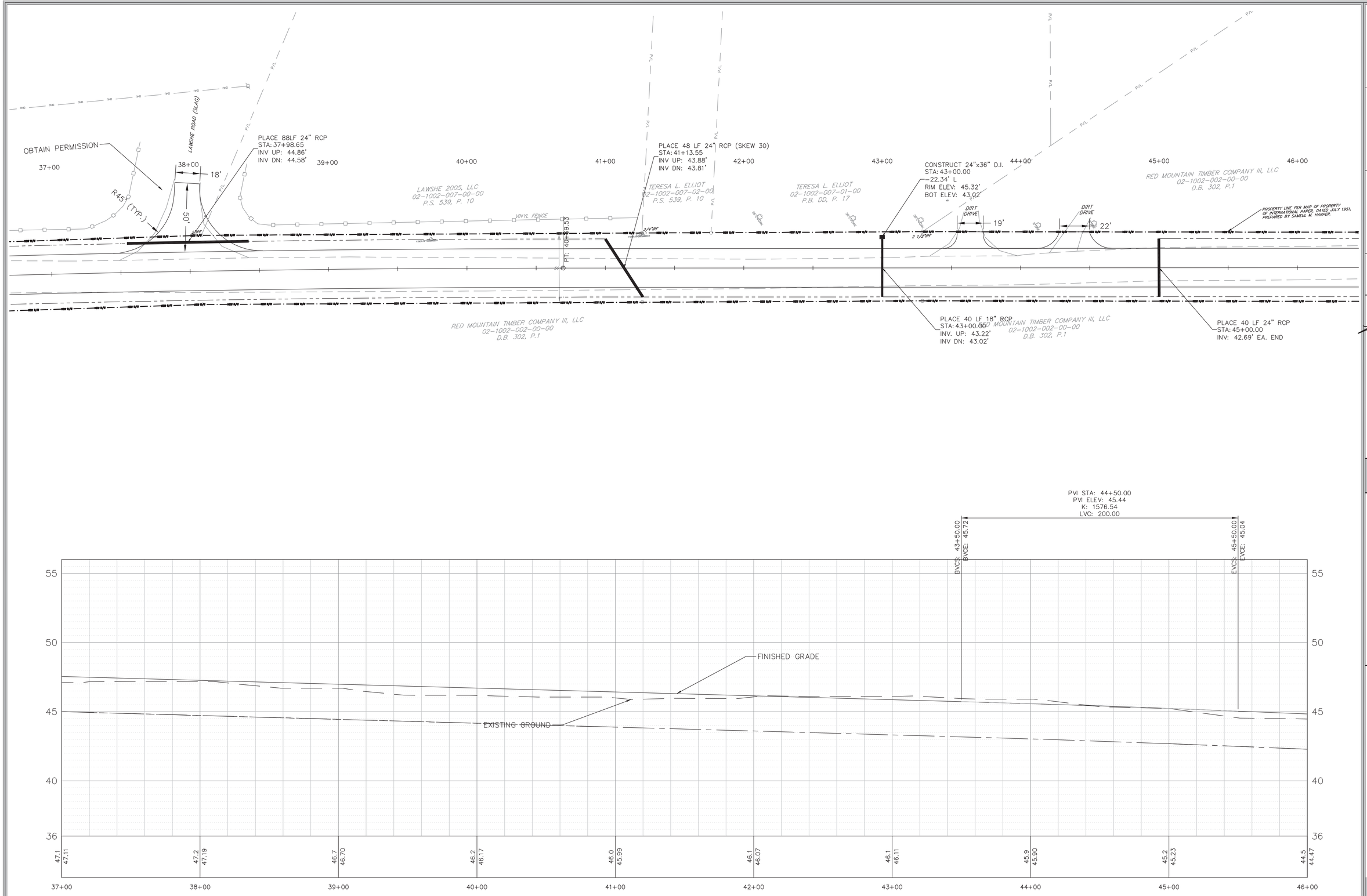
FOR GEORGETOWN COUNTY

GEORGETOWN COUNTY, SOUTH CAROLINA

PROJECT ID
G0004.31

SCALE
1" = 30'

SHEET
8



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SOUTH CAROLINA DENNIS CORPORATION NO. 3103 CERTIFICATE OF AUTHORIZATION

ENGINEER	DESIGNER	CHECKED
D. HAMRICK	S. SAUNDERS	M. HINES

PLAN & PROFILE
4 OF 14

DENNIS CORPORATION

IMPROVEMENTS TO
INDIAN HUT ROAD AND
AMOS ROAD
FOR GEORGETOWN COUNTY

GEORGETOWN COUNTY, SOUTH CAROLINA

PROJECT ID
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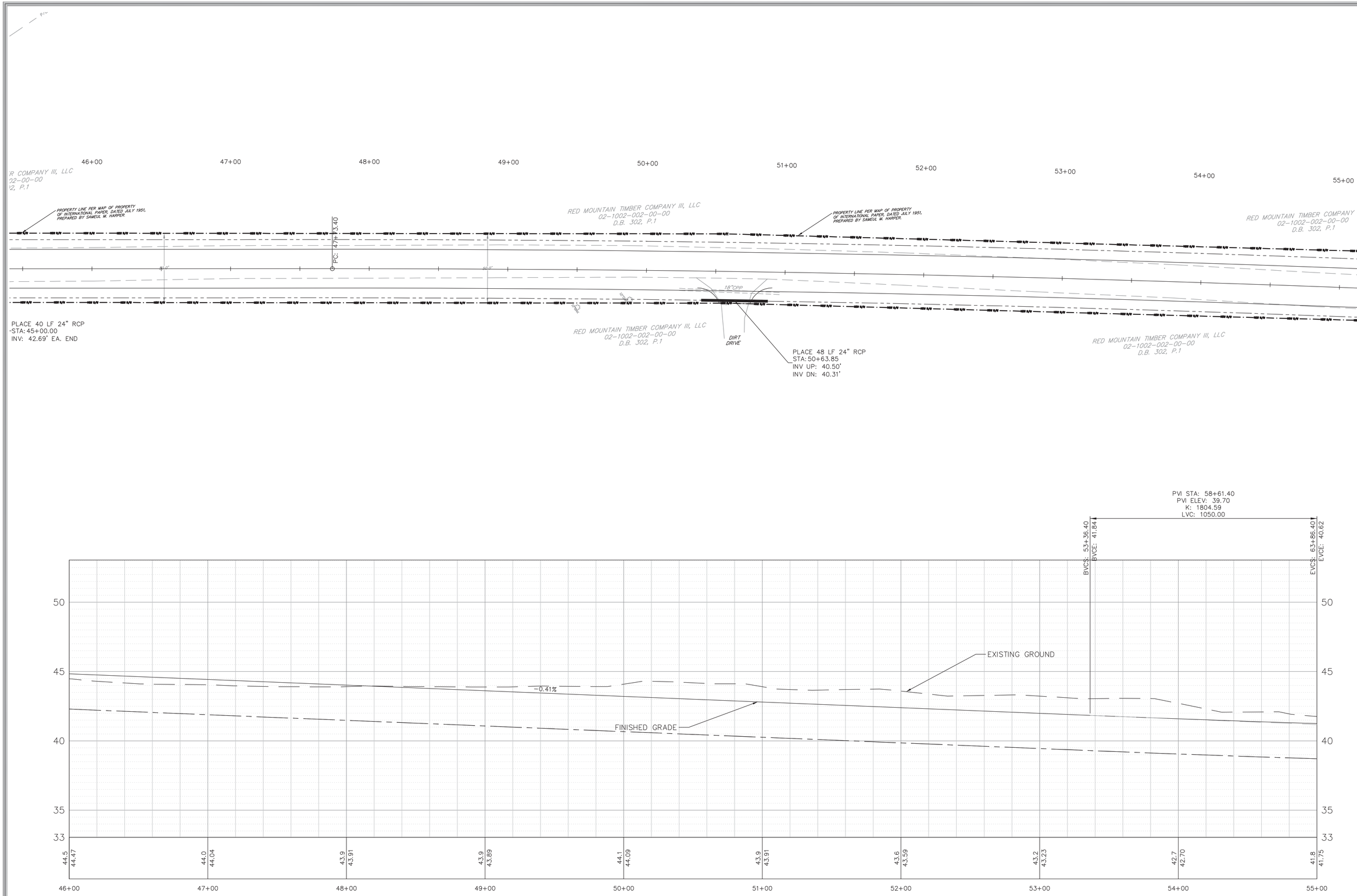
SCALE
1" = 30'

SHEET
9



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SOUTH CAROLINA PROFESSIONAL ENGINEER No. 32702 12/11/20 MATTHEW THOMAS HINES

SOUTH CAROLINA DENNIS CORPORATION NO. 3103 CERTIFICATE OF AUTHORIZATION

ENGINEER	DESIGNER	CHECKED
D. HAMRICK	S. SAUNDERS	M. HINES

PLAN & PROFILE
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DENNIS CORPORATION

IMPROVEMENTS TO
INDIAN HUT ROAD AND
AMOS ROAD
FOR GEORGETOWN COUNTY

GEORGETOWN COUNTY, SOUTH CAROLINA

PROJECT ID
G0004.31

SCALE
1" = 30'

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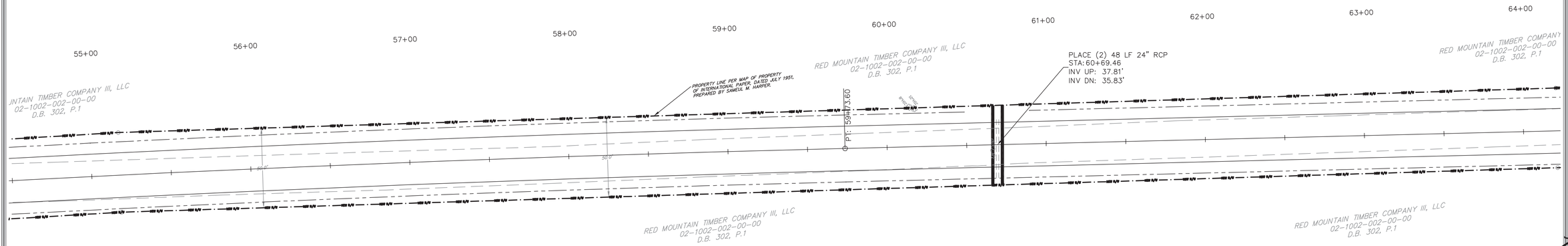

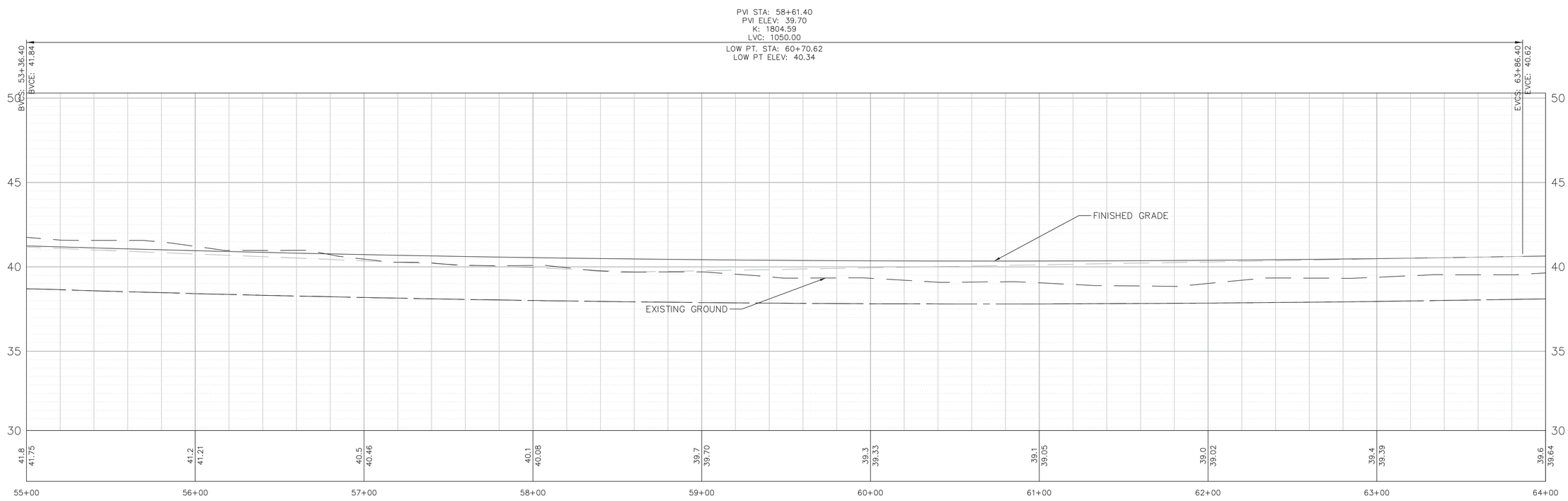

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SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 29302
11/05/2020
MATTHEW THOMAS HINES

SOUTH CAROLINA
DENNIS CORPORATION
NO. 3103
CERTIFICATE OF AUTHORIZATION

ENGINEER	DESIGNER	CHECKED
D. HAMRICK	S. SAUNDERS	M. HINES

DENNIS CORPORATION

PLAN & PROFILE
6 OF 14

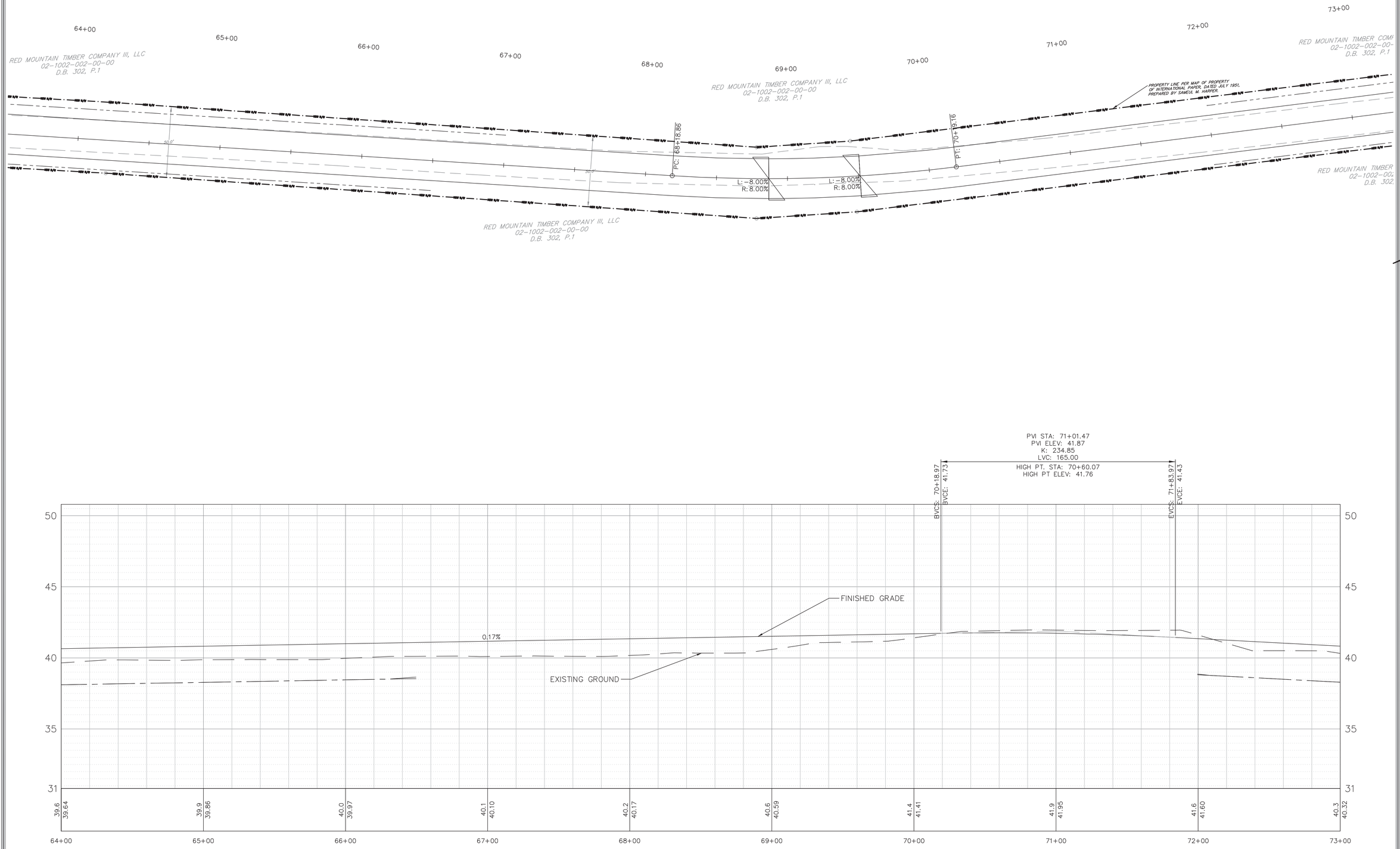
IMPROVEMENTS TO
INDIAN HUT ROAD AND
AMOS ROAD
FOR GEORGETOWN COUNTY

GEORGETOWN COUNTY, SOUTH CAROLINA

PROJECT ID
G0004.31

SCALE
1" = 30'

SHEET
11



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SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 32702 MATTHEW THOMAS HINES

SOUTH CAROLINA DENNIS CORPORATION NO. 3103 CERTIFICATE OF AUTHORIZATION

ENGINEER	DESIGNER	CHECKED
D. HAMRICK	S. SAUNDERS	M. HINES

PLAN & PROFILE
7 OF 14

DENNIS CORPORATION

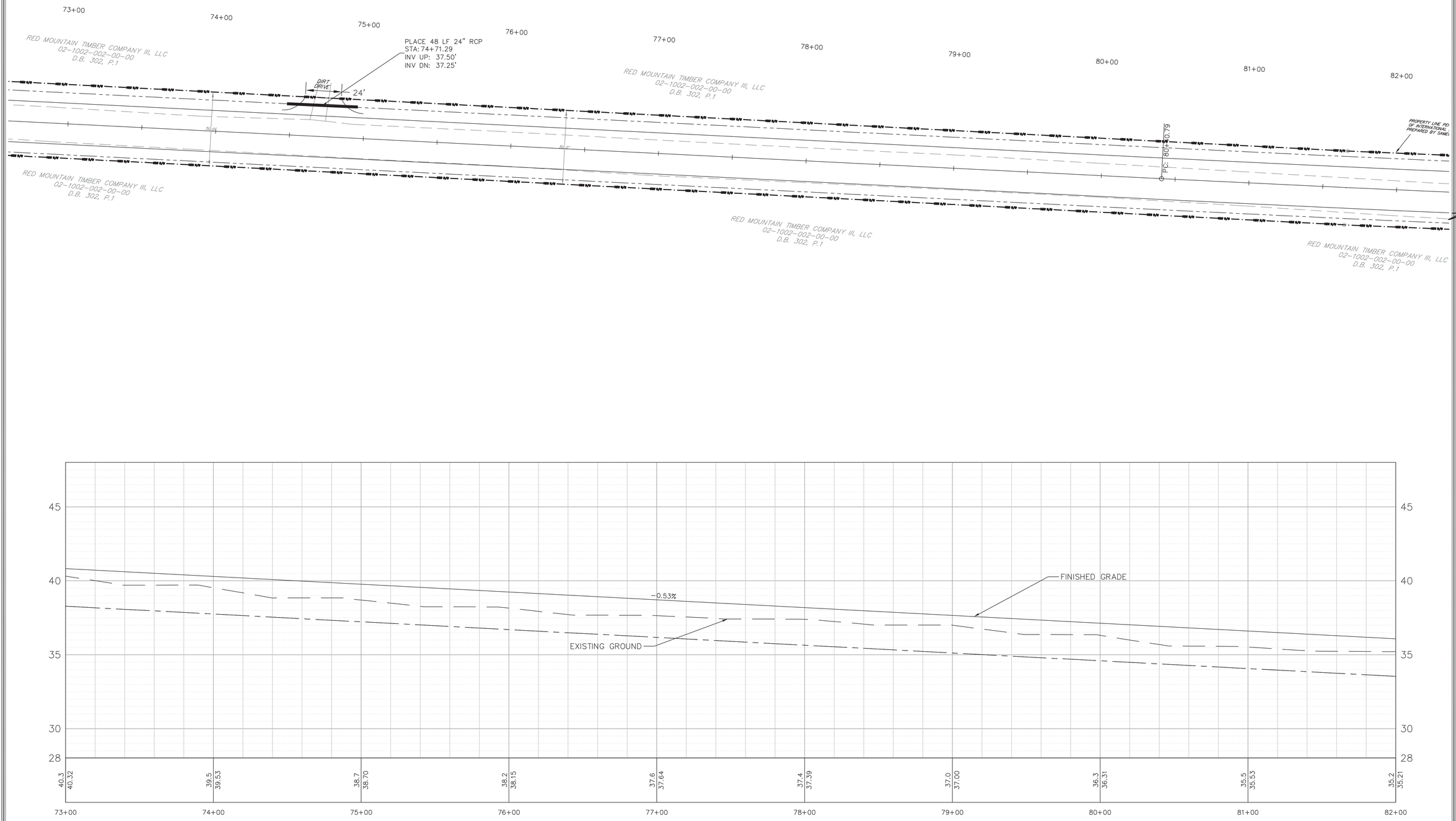
IMPROVEMENTS TO
INDIAN HUT ROAD AND
AMOS ROAD
FOR GEORGETOWN COUNTY

GEORGETOWN COUNTY, SOUTH CAROLINA

PROJECT ID
G0004.31

SCALE
1" = 30'

SHEET
12



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SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 32702
12/15/20
MATTHEW THOMAS HINES

SOUTH CAROLINA
DENNIS CORPORATION
NO. 3103
CERTIFICATE OF AUTHORIZATION

ENGINEER	DESIGNER	CHECKED
D. HAMRICK	S. SAUNDERS	M. HINES

PLAN & PROFILE
8 OF 14

DENNIS CORPORATION

IMPROVEMENTS TO
INDIAN HUT ROAD AND
AMOS ROAD
FOR GEORGETOWN COUNTY

GEORGETOWN COUNTY, SOUTH CAROLINA

PROJECT ID
G0004.31

SCALE
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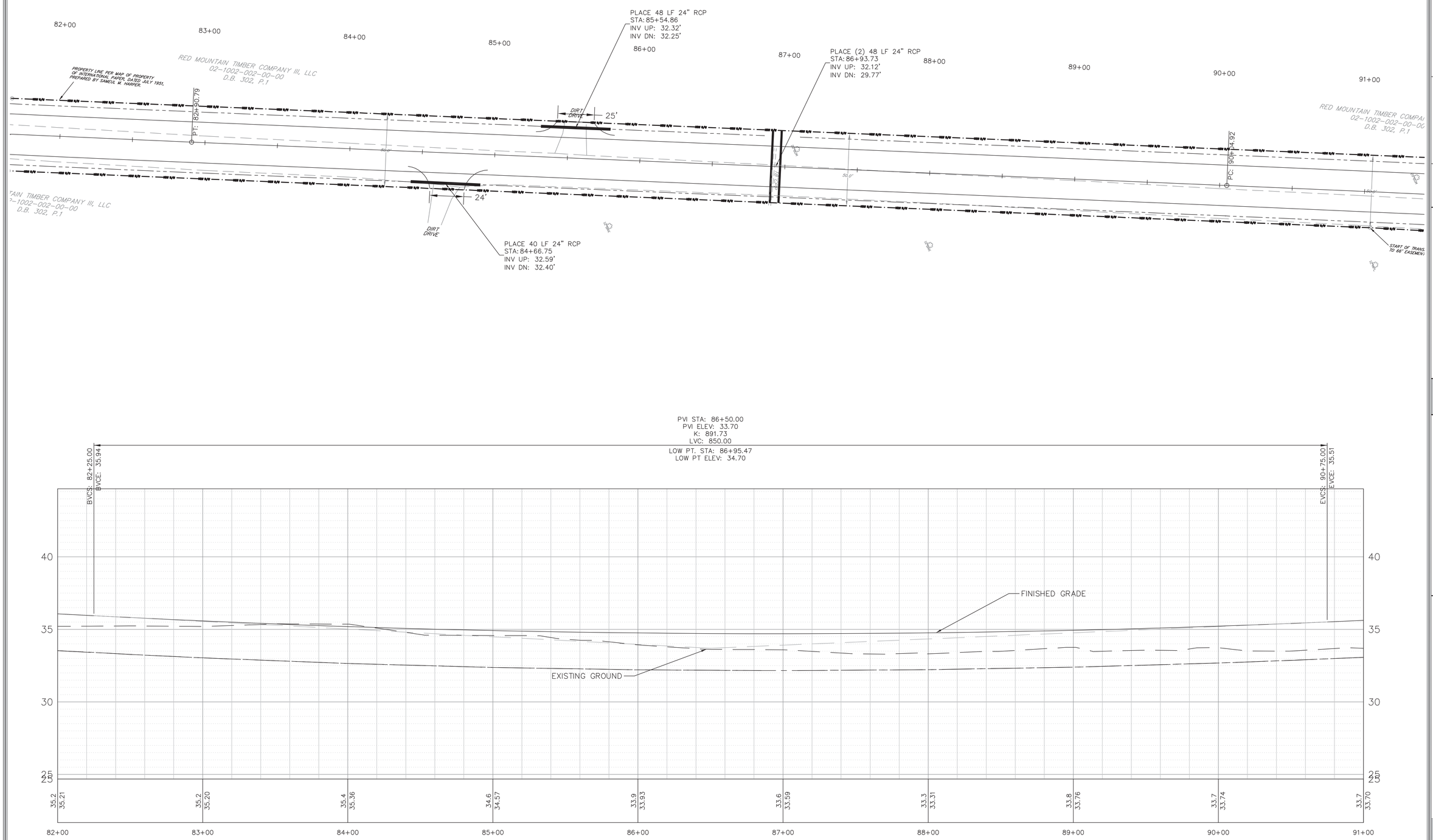
SHEET
13



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SOUTH CAROLINA PROFESSIONAL ENGINEER No. 32702 12/11/20 MATTHEW THOMAS HINES

SOUTH CAROLINA DENNIS CORPORATION NO. 3103 CERTIFICATE OF AUTHORIZATION

ENGINEER	DESIGNER	CHECKED
D. HAMRICK	S. SAUNDERS	M. HINES

PLAN & PROFILE
9 OF 14

DENNIS CORPORATION

IMPROVEMENTS TO
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FOR GEORGETOWN COUNTY

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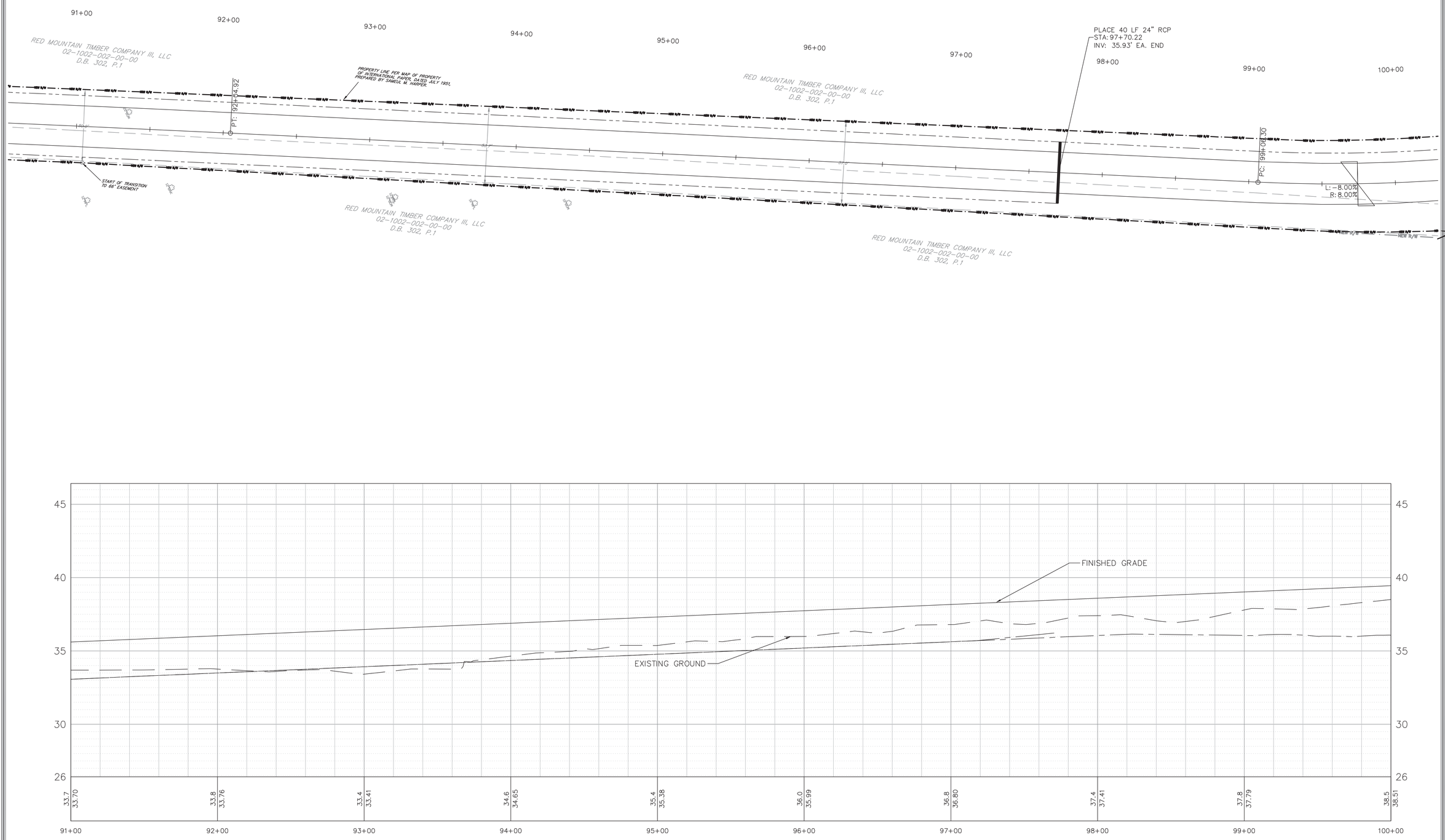

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SOUTH CAROLINA PROFESSIONAL ENGINEER No. 32702 11/14/20 MATTHEW THOMAS HINES

SOUTH CAROLINA DENNIS CORPORATION NO. 3103 CERTIFICATE OF AUTHORIZATION

ENGINEER: D. HAMRICK
DESIGNER: S. SAUNDERS
CHECKED: M. HINES

PLAN & PROFILE
10 OF 14

DENNIS CORPORATION

IMPROVEMENTS TO
INDIAN HUT ROAD AND
AMOS ROAD
FOR GEORGETOWN COUNTY

GEORGETOWN COUNTY, SOUTH CAROLINA

PROJECT ID
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SCALE
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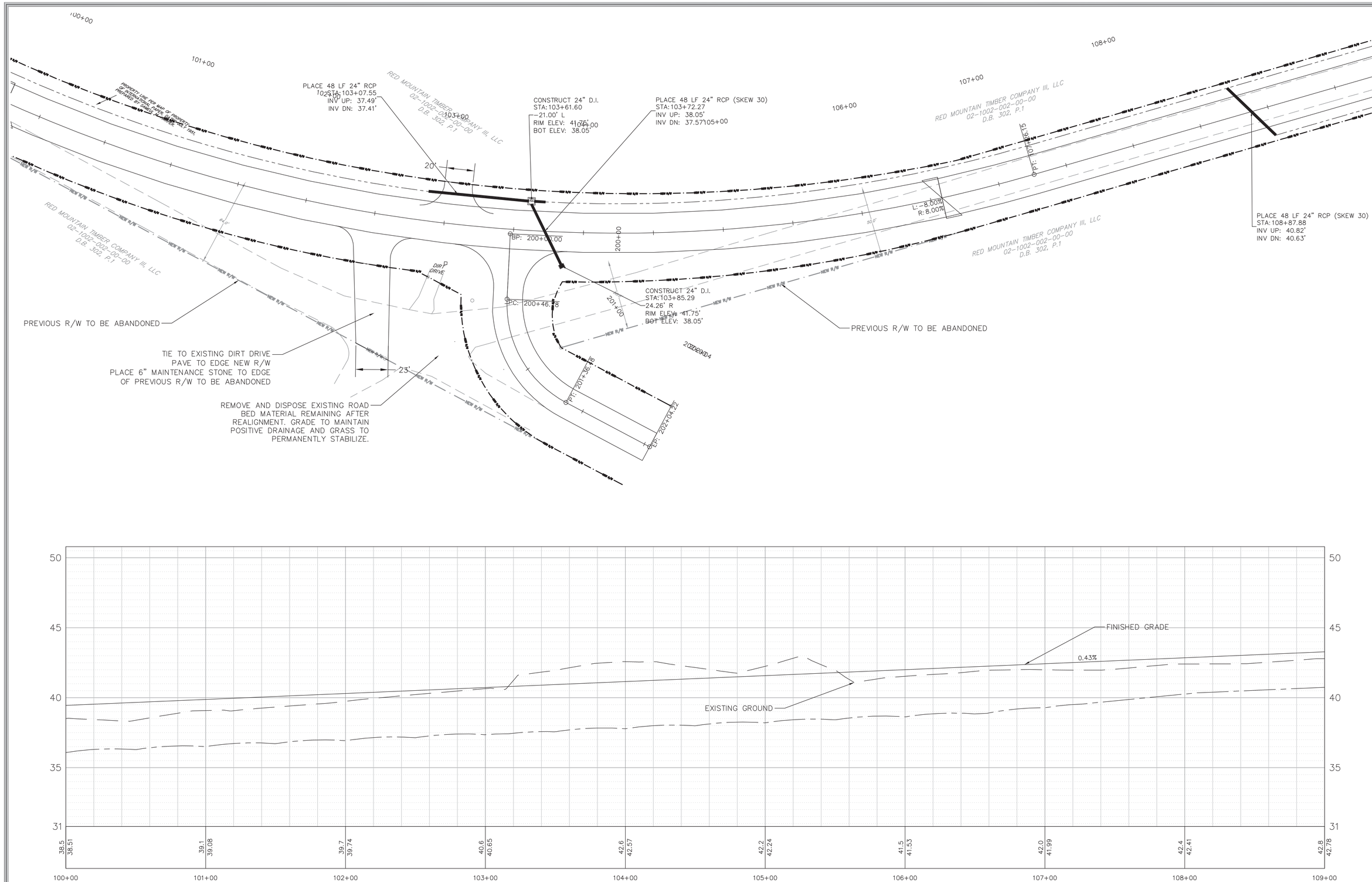
SHEET
15



ISSUE DATE:	CONSTR:	BIDS:	PERMITS: 11/05/2020
REV. #	DATE	DESCRIPTION	
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SOUTH CAROLINA PROFESSIONAL ENGINEER No. 32702 12/1/20 MATTHEW THOMAS HINES

SOUTH CAROLINA DENNIS CORPORATION NO. 3103 CERTIFICATE OF AUTHORIZATION

ENGINEER	DESIGNER	CHECKED
D. HAMRICK	S. SAUNDERS	M. HINES

PLAN & PROFILE
11 OF 14

DENNIS CORPORATION

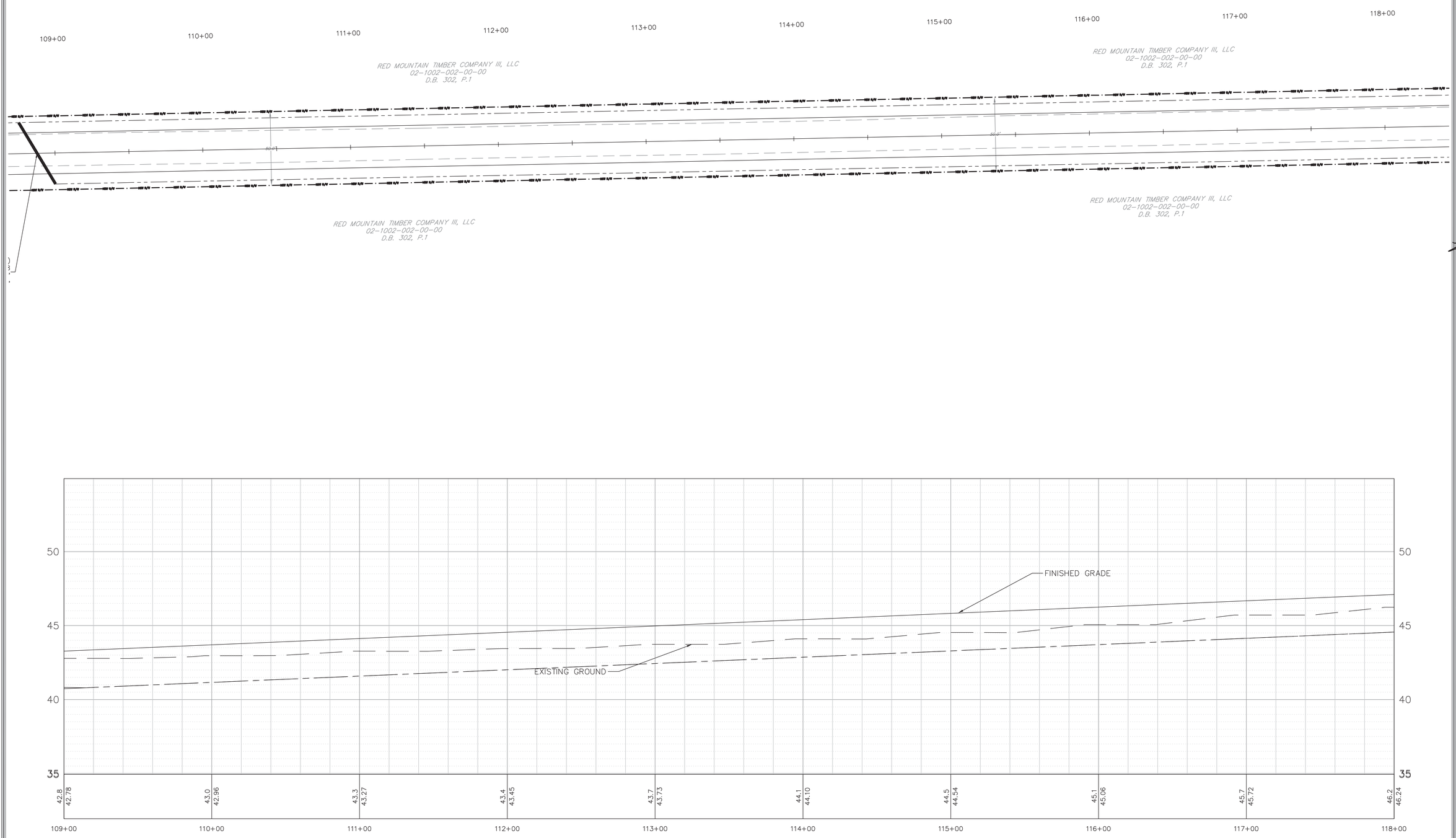
IMPROVEMENTS TO
INDIAN HUT ROAD AND
AMOS ROAD
FOR GEORGETOWN COUNTY

GEORGETOWN COUNTY, SOUTH CAROLINA

PROJECT ID
G0004.31

SCALE
1" = 30'

SHEET
16



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SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
No. 32702
12/1/2020
MATTHEW THOMAS HINES

SOUTH CAROLINA
DENNIS CORPORATION
NO. 3103
CERTIFICATE OF AUTHORIZATION

ENGINEER	DESIGNER	CHECKED
D. HAMRICK	S. SAUNDERS	M. HINES

PLAN & PROFILE
12 OF 14

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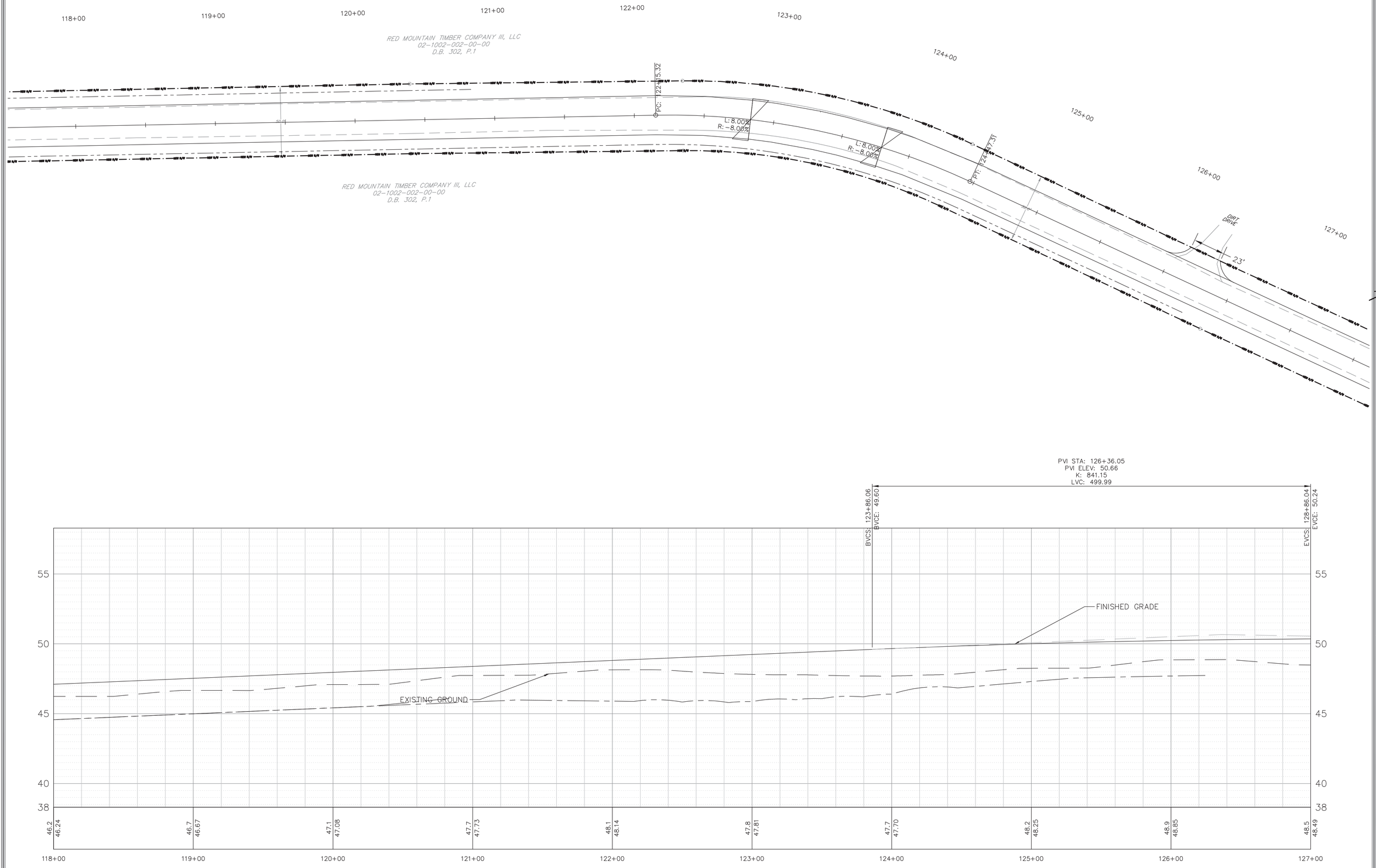
SHEET
17



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DENNIS CORPORATION

PLAN & PROFILE
13 OF 14

IMPROVEMENTS TO
INDIAN HUT ROAD AND
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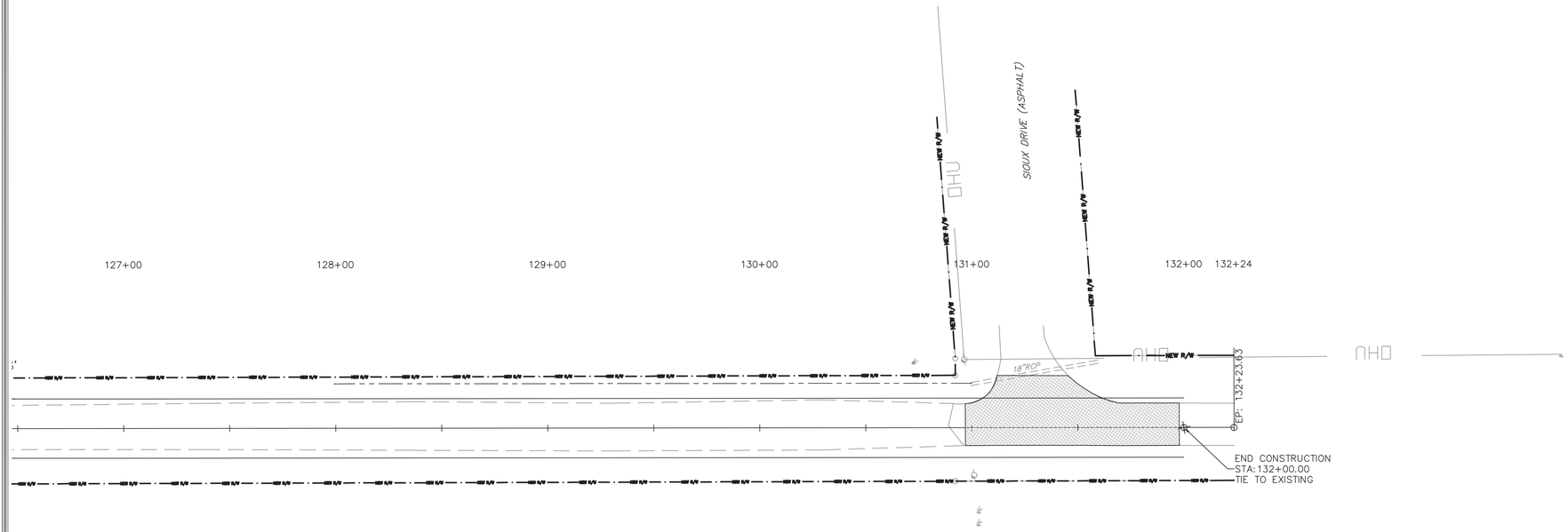
FOR GEORGETOWN COUNTY

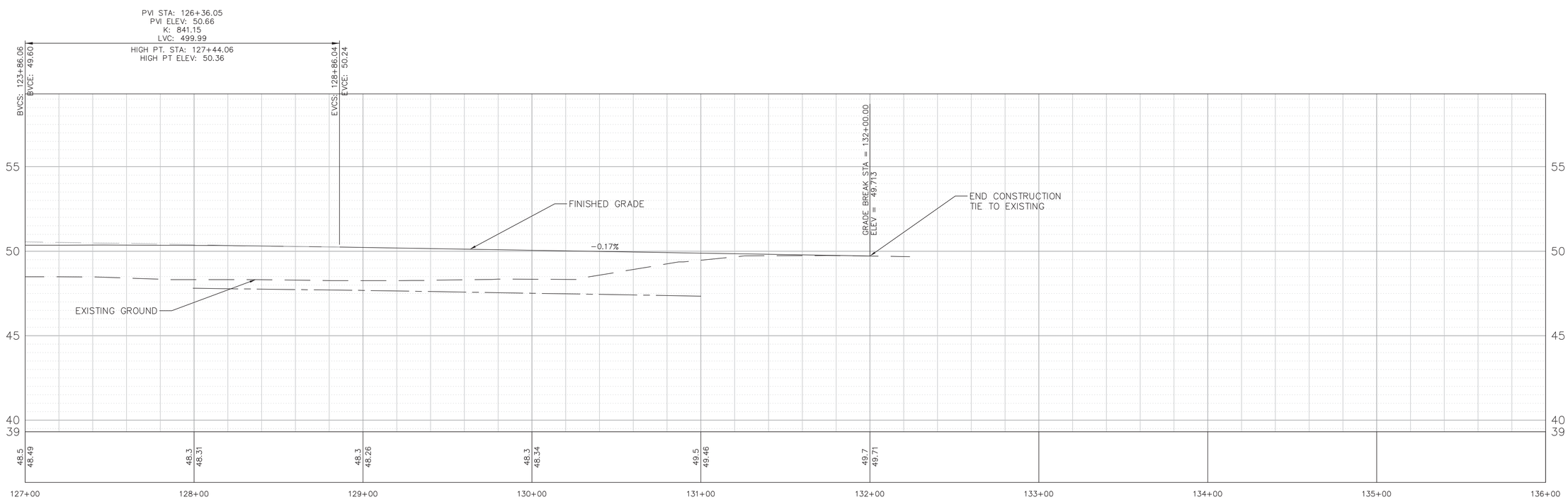
GEORGETOWN COUNTY, SOUTH CAROLINA

PROJECT ID
G0004.31

SCALE
1" = 30'

SHEET
18





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D. HAMRICK	S. SAUNDERS	M. HINES

PLAN & PROFILE
14 OF 14

DENNIS CORPORATION

IMPROVEMENTS TO
INDIAN HUT ROAD AND
AMOS ROAD
FOR GEORGETOWN COUNTY

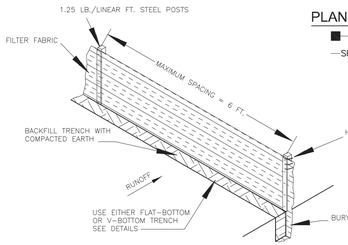
GEORGETOWN COUNTY, SOUTH CAROLINA

PROJECT ID
G0004.31

SCALE
1" = 30'

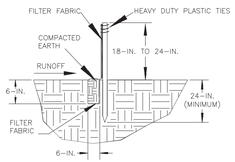
SHEET
19

SILT FENCE INSTALLATION

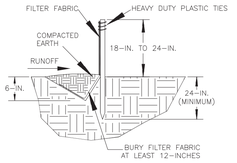


PLAN SYMBOL

FLAT-BOTTOM TRENCH DETAIL



V-SHAPED TRENCH DETAIL



SILT FENCE – GENERAL NOTES

1. Do not place silt fence across channels or in other areas subject to concentrated flows. Silt fence should not be used as a velocity control BMP. Concentrated flows are any flows greater than 0.5 cfs.
2. Maximum sheet or overland flow path length to the silt fence shall be 100–feet.
3. Maximum slope steepness (normal [perpendicular] to the fence line) shall be 2:1.
4. Silt fence joints, when necessary, shall be completed by one of the following options:
   – Wrap each fabric together at a support post with both ends fastened to the post, with a 1–foot minimum overlap;
   – Overlap silt fence by installing 3–feet passed the support post to which the new silt fence roll is attached. Attach old roll to new roll with heavy–duty plastic ties; or,
   – Overlap entire width of each silt fence roll from one support post to the next support post.
5. Attach filter fabric to the steel posts using heavy–duty plastic ties that are evenly spaced within the top 8–inches of the fabric.
6. Install the silt fence perpendicular to the direction of the stormwater flow and place the silt fence the proper distance from the toe of steep slopes to provide sediment storage and access for maintenance and cleanout.
7. Install Silt Fence Checks (Tie–Backs) every 50–100 feet, dependent on slope, along silt fence that is installed with slope and where concentrated flows are expected or are documented along the proposed/installed silt fence.

SILT FENCE – POST REQUIREMENTS

1. Silt Fence posts must be 48–inch long steel posts that meet, at a minimum, the following physical characteristics.
   – Composed of a high strength steel with a minimum yield strength of 50,000 psi.
   – Include a standard "T" section with a nominal face width of 1.38–inches and a nominal "T" length of 1.48–inches.
   – Weigh 1.25 pounds per foot (± 8%)
2. Posts shall be equipped with projections to aid in fastening of filter fabric.
3. Steel posts may need to have a metal soil stabilization plate welded near the bottom when installed along steep slopes or installed in loose soils. The plate should have a minimum cross section of 17–square inches and be composed of 15 gouge steel, at a minimum. The metal soil stabilization plate should be completely buried.
4. Install posts to a minimum of 24–inches. A minimum height of 1– to 2–inches above the fabric shall be maintained, and a maximum height of 3 feet shall be maintained above the ground.
5. Post spacing shall be at a maximum of 6–feet on center.

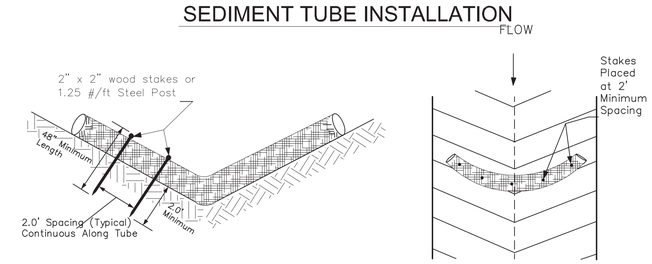
SILT FENCE – FABRIC REQUIREMENTS

1. Silt fence must be composed of woven geotextile filter fabric that consists of the following requirements:
   – Composed of fibers consisting of long chain synthetic polymers of at least 85% by weight of polyolefins, polyesters, or polyamides that are formed into a network such that the filaments or yarns retain dimensional stability relative to each other;
   – Free of any treatment or coating which might adversely alter its physical properties after installation;
   – Free of any defects or flaws that significantly affect its physical and/or filtering properties; and,
   – Have a minimum width of 36–inches.
2. Use only fabric appearing on SC DOT"s Qualified Products Listing (QPL), Approval Sheet #34, meeting the requirements of the most current edition of the SC DOT Standard Specifications for Highway Construction.
3. 12–inches of the fabric should be placed within excavated trench and toed in when the trench is backfilled.
4. Filter Fabric shall be purchased in continuous rolls and cut to the length of the barrier to avoid joints.
5. Filter Fabric shall be installed at a minimum of 24–inches above the ground.

SILT FENCE – INSPECTION & MAINTENANCE

1. The key to functional silt fence is weekly inspections, routine maintenance, and regular sediment removal.
2. Regular inspections of silt fence shall be conducted once every calendar week and, as recommended, within 24–hours after each rainfall even that produces 1/2–inch or more of precipitation.
3. Attention to sediment accumulations along the silt fence is extremely important. Accumulated sediment should be continually monitored and removed when necessary.
4. Remove accumulated sediment when it reaches 1/3 the height of the silt fence.
5. Removed sediment shall be placed in stockpile storage areas or spread thinly across disturbed area. Stabilize the removed sediment after it is relocated.
6. Check for areas where stormwater runoff has eroded a channel beneath the silt fence, or where the fence has sagged or collapsed due to runoff overtopping the silt fence. Install checks/tie–backs and/or reinstall silt fence, as necessary.
7. Check for tears within the silt fence, areas where silt fence has begun to decompose, and for any other circumstance that may render the silt fence ineffective. Removed damaged silt fence and reinstall new silt fence immediately.
8. Silt fence should be removed within 30 days after final stabilization is achieved and once it is removed, the resulting disturbed area shall be permanently stabilized.

SEDIMENT TUBE INSTALLATION



SEDIMENT TUBE SPACING

SLOPE	MAX. SEDIMENT TUBE SPACING
LESS THAN 2%	150–FEET
2%	100–FEET
3%	75–FEET
4%	50–FEET
5%	40–FEET
6%	30–FEET
GREATER THAN 6%	25–FEET

PLAN SYMBOL

SEDIMENT TUBES – GENERAL NOTES

1. Sediment tubes may be installed along contours, in drainage conveyance channels, and around inlets to help prevent off–site discharge of sediment–laden stormwater runoff.

   2. Sediment tubes are elongated tubes of compacted geotextiles, curled excelsior wood, natural coconut fiber, or hardwood mulch. Straw, pine needle, and leaf mulch–filled sediment tubes are not permitted.

3. The outer netting of the sediment tube should consist of seamless, high–density polyethylene photodegradable materials treated with ultraviolet stabilizers or a seamless, high–density polyethylene non–degradable material.
4. Sediment tubes, when used as checks within channels, should range between 18–inches and 24–inches depending on channel dimensions. Diameters outside this range may be allowed where necessary when approved.
5. Curled excelsior wood, or natural coconut products that are rolled up to create a sediment tube are not allowed.

   6. Sediment tubes should be staked using wooden stakes (2–inch X 2–inch) or steel posts (standard "U" or "T" sections with a minimum weight of 1.25 pounds per foot) at a minimum of 48–inches in length placed on 2–foot centers.

7. Install all sediment tubes to ensure that no gaps exist between the soil and the bottom of the tube. Manufacturer's recommendations should always be consulted before installation.
8. The ends of adjacent sediment tubes should be overlapped 6–inches to prevent flow and sediment from passing through the field joint.

   9. Sediment tubes should not be stacked on top of one another, unless recommended by manufacturer.

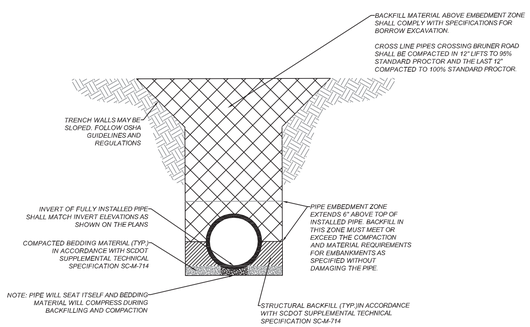
10. Each sediment tube should be installed in a trench with a depth equal to 1/5 the diameter of the sediment tube.
11. Sediment tubes should continue up the side slopes a minimum of 1–foot above the design flow depth of the channel.
12. Install stakes at a diagonal facing incoming runoff.

SEDIMENT TUBES – INSPECTION & MAINTENANCE

1. The key to functional sediment tubes is weekly inspections, routine maintenance, and regular sediment removal.
2. Regular inspections of sediment tubes shall be conducted once every calendar week and, as recommended, within 24–hours after each rainfall even that produces 1/2–inch or more of precipitation.
3. Attention to sediment accumulations in front of the sediment tube is extremely important. Accumulated sediment should be continually monitored and removed when necessary.
4. Remove accumulated sediment when it reaches 1/3 the height of the sediment tube.
5. Removed sediment shall be placed in stockpile storage areas or spread thinly across disturbed area. Stabilize the removed sediment after it is relocated.
6. Large debris, trash, and leaves should be removed from in front of tubes when found.
7. If erosion causes the edges to fail to a height equal to or below the height of the sediment tube, repairs should be made immediately to prevent runoff from bypassing tube.
8. Sediment tubes should be removed after the contributing drainage area has been completely stabilized. Permanent vegetation should replace areas from which sediment tubes have been removed.

SEDIMENT & EROSION CONTROL NOTES:

1. AS NECESSARY, SLOPES, WHICH EXCEED EIGHT (8) VERTICAL FEET SHOULD BE STABILIZED WITH SYNTHETIC OR VEGETATIVE MATS, IN ADDITION TO HYDROSEEDING. IT MAY BE NECESSARY TO INSTALL TEMPORARY SLOPE DRAINS DURING CONSTRUCTION. TEMPORARY BERMS MAY BE NEEDED UNTIL THE SLOPE IS BROUGHT TO GRADE.
2. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN FOURTEEN (14) DAYS AFTER WORK HAS CEASED, EXCEPT AS STATED BELOW.
   - WHERE STABILIZATION BY THE 14TH DAY IS PRECLUDED BY SNOW COVER OR FROZEN GROUND CONDITIONS, STABILIZATION MEASURES MUST BE INITIATED AS SOON AS PRACTICABLE.
   - WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH–DISTURBING ACTIVITIES WILL BE RESUMED WITHIN 14 DAYS, TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE IN INITIATED ON THAT PORTION OF THE SITE.
3. ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED ONCE EVERY CALENDAR WEEK. IF PERIODIC INSPECTION OR OTHER INFORMATION INDICATES THAT A BMP HAS BEEN INSTALLED INAPPROPRIATELY, OR INCORRECTLY, THE PERMITTEE MUST ADDRESS THE NECESSARY REPLACEMENT OR MODIFICATION REQUIRED TO CORRECT THE BMP WITHIN 48 HOURS OF IDENTIFICATION.
4. PROVIDE SILT FENCE AND/OR OTHER CONTROL DEVICES, AS MAY BE REQUIRED, TO CONTROL SOIL EROSION DURING UTILITY CONSTRUCTION. ALL DISTURBED AREAS SHALL BE CLEANED, GRADED, AND STABILIZED WITH GRASSING IMMEDIATELY AFTER THE INSTALLATION OF UTILITIES. FILL, COVER AND TEMPORARY SEEDING AT THE END OF EACH DAY ARE RECOMMENDED. IF WATER IS ENCOUNTERED WHILE TRENCHING, THE WATER SHOULD BE FILTERED TO REMOVE ANY SEDIMENT BEFORE BEING PUMPED BACK INTO ANY WATERS OF THE STATE.
5. ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND ALL DISTURBED AREAS HAVE BEEN STABILIZED. ADDITIONAL CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION IN ORDER TO CONTROL EROSION AND/OR OFFSITE SEDIMENTATION. ALL TEMPORARY CONTROL DEVICES SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED.
6. THE CONTRACTOR MUST TAKE NECESSARY ACTION TO MINIMIZE THE TRACKING OF MUD ONTO PAVED ROADWAY(S) FROM CONSTRUCTION AREAS AND THE GENERATION OF DUST. THE CONTRACTOR SHALL DAILY REMOVE MUD/SOIL FROM PAVEMENT, AS MAY BE REQUIRED.
7. TEMPORARY DIVERSION BERMS AND/OR DITCHES WILL BE PROVIDED AS NEEDED DURING CONSTRUCTION TO PROTECT WORK AREAS FROM UPSLOPE RUNOFF AND/OR TO DIVERT SEDIMENT–LADEN WATER TO APPROPRIATE TRAPS OR STABLE OUTLETS.
8. ALL WATERS OF THE STATE (WOS), INCLUDING WETLANDS, ARE TO BE FLAGGED OR OTHERWISE CLEARLY MARKED IN THE FIELD. A DOUBLE ROW OF SILT FENCE IS TO BE INSTALLED IN ALL AREAS WHERE A 50–FOOT BUFFER CAN'T BE MAINTAINED BETWEEN THE DISTURBED AREA AND ALL WOS. A 10–FOOT BUFFER SHOULD BE MAINTAINED BETWEEN THE LAST ROW OF SILT FENCE AND ALL WOS.
9. LITTER, CONSTRUCTION DEBRIS, OILS, FUELS, AND BUILDING PRODUCTS WITH SIGNIFICANT POTENTIAL FOR IMPACT (SUCH AS STOCKPILES OF FRESHLY TREATED LUMBER) AND CONSTRUCTION CHEMICALS THAT COULD BE EXPOSED TO STORM WATER MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE IN STORM WATER DISCHARGES.
10. A COPY OF THE SWPPP, INSPECTIONS RECORDS, AND RAINFALL DATA MUST BE RETAINED AT THE CONSTRUCTION SITE OR A NEARBY LOCATION EASILY ACCESSIBLE DURING NORMAL BUSINESS HOURS, FROM THE DATE OF COMMENCEMENT OF CONSTRUCTION ACTIVITIES TO THE DATE THAT FINAL STABILIZATION IS REACHED.
11. INITIATE STABILIZATION MEASURES ON ANY EXPOSED STEEP SLOPE (3H:1V OR GREATER) WHERE LAND–DISTURBING ACTIVITIES HAVE PERMANENTLY OR TEMPORARILY CEASED, AND WILL NOT RESUME FOR A PERIOD OF 7 CALENDAR DAYS.
12. MINIMIZE SOIL COMPACTION AND, UNLESS INFEASIBLE, PRESERVE TOPSOIL.
13. MINIMIZE THE DISCHARGE OF POLLUTANTS FROM EQUIPMENT AND VEHICLE WASHING, WHEEL WASH WATER, AND OTHER WASH WATERS. WASH WATERS MUST BE TREATED IN A SEDIMENT BASIN OR ALTERNATIVE CONTROL THAT PROVIDES EQUIVALENT OR BETTER TREATMENT PRIOR TO DISCHARGE.
14. MINIMIZE THE DISCHARGE OF POLLUTANTS FROM DEWATERING OF TRENCHES AND EXCAVATED AREAS. THESE DISCHARGES ARE TO BE ROUTED THROUGH APPROPRIATE BMPS (SEDIMENT BASIN, FILTER BAG, ETC.).
15. THE FOLLOWING DISCHARGES FROM SITES ARE PROHIBITED:
   - WASTEWATER FROM WASHOUT OF CONCRETE, UNLESS MANAGED BY AN APPROPRIATE CONTROL
   - WASTEWATER FROM WASHOUT AND CLEANOUT OF STUCCO, PAINT, FORM RELEASING OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS
   - FUELS, OILS OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE
   - SOAPS OR SOLVENTS USED IN VEHICLE AND EQUIPMENT WASHING
16. AFTER CONSTRUCTION ACTIVITIES BEGIN, INSPECTIONS MUST BE CONDUCTED AT A MINIMUM OF AT LEAST ONCE EVERY CALENDAR WEEK AND MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE.
17. IF EXISTING BMPS NEED TO BE MODIFIED OR IF ADDITIONAL BMPS ARE NECESSARY TO COMPLY WITH THE REQUIREMENTS OF THE NPDES GENERAL PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES AND/OR SC'S WATER QUALITY STANDARDS, IMPLEMENTATION MUST BE COMPLETED BEFORE THE NEXT STORM EVENT WHENEVER PRACTICABLE. IF IMPLEMENTATION BEFORE THE NEXT STORM EVENT IS IMPRACTICABLE, THE SITUATION MUST BE DOCUMENTED IN THE SWPPP AND ALTERNATIVE BMPS MUST BE IMPLEMENTED AS SOON AS REASONABLY POSSIBLE.
18. A PRECONSTRUCTION CONFERENCES MUST BE HELD FOR EACH CONSTRUCTION SITE WITH AN APPROVED ON–SITE SWPPP PRIOR TO THE IMPLEMENTATION OF CONSTRUCTION ACTIVITIES. FOR NON–LINEAR PROJECTS THAT DISTURB 10 ACRES OR MORE THIS CONFERENCE MUST BE HELD ON–SITE UNLESS THE SC DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL HAS APPROVED OTHERWISE.



PIPE BEDDING DETAIL
N.T.S.

STABILIZED CONSTRUCTION ENTRANCE NOTES:

WHEN AND WHERE TO USE IT

STABILIZED CONSTRUCTION ENTRANCES SHOULD BE USED AT ALL POINTS WHERE TRAFFIC WILL BE LEAVING A CONSTRUCTION SITE AND MOVING DIRECTLY ONTO A PUBLIC ROAD.

IMPORTANT CONSIDERATIONS

IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF SITE. WASHDOWN FACILITIES SHALL BE REQUIRED AS DIRECTED BY SCDHEC AS NEEDED. WASHDOWN AREAS IN GENERAL MUST BE ESTABLISHED WITH CRUSHED GRAVEL AND DRAIN INTO A SEDIMENT TRAP OR SEDIMENT BASIN. CONSTRUCTION ENTRANCES SHOULD BE USED IN CONJUNCTION WITH THE STABILIZATION OF CONSTRUCTION ROADS TO REDUCE THE AMOUNT OF MUD PICKED UP BY VEHICLES.

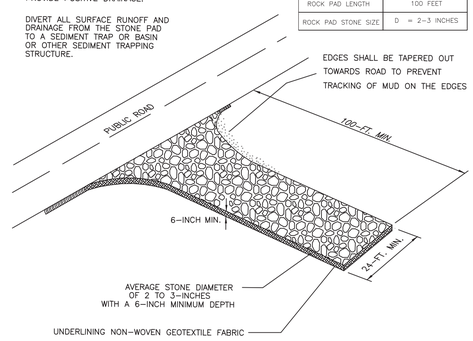
INSTALLATION

REMOVE ALL VEGETATION AND ANY OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA.
DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM STONES TO A SEDIMENT TRAP OR BASIN.
INSTALL A NON-WOVEN GEOTEXTILE FABRIC PRIOR TO PLACING ANY STONE.
INSTALL A CULVERT PIPE ACROSS THE ENTRANCE WHEN NEEDED TO PROVIDE POSITIVE DRAINAGE.
THE ENTRANCE SHALL CONSIST OF 1-INCH TO 3-INCH (2IN) STONE PLACED AT A MINIMUM DEPTH OF 6-INCHES. MINIMUM DIMENSIONS OF THE ENTRANCE SHALL BE 24-FEET WIDE BY 100-FEET LONG, AND MAY BE MODIFIED AS NECESSARY TO ACCOMMODATE SITE CONSTRAINTS.
THE EDGES OF THE ENTRANCE SHALL BE TAPERED OUT TOWARDS THE ROAD TO PREVENT TRACKING OF MUD AT THE EDGE OF THE ENTRANCE.

INSPECTION AND MAINTENANCE:

INSPECT CONSTRUCTION ENTRANCES EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24-HOURS AFTER EACH RAINFALL EVENT THAT PRODUCES 1-INCHES OR MORE OF PRECIPITATION OR AFTER HEAVY USE. CHECK FOR MUD AND SEDIMENT BUILDUP AND PAD INTEGRITY. MAKE DAILY INSPECTIONS DURING PERIODS OF WET WEATHER. MAINTENANCE IS REQUIRED MORE FREQUENTLY IN WET WEATHER CONDITIONS. RESHAPE THE STONE PAD AS NEEDED FOR DRAINAGE AND RUNOFF CONTROL.
WASH OR REPLACE STONES AS NEEDED AND AS DIRECTED BY THE INSPECTOR. THE STONE IN THE ENTRANCE SHOULD BE WASHED OR REPLACED WHENEVER THE ENTRANCE FAILS TO REDUCE MUD BEING CARRIED OFF-SITE BY VEHICLES. FREQUENT WASHING WILL EXTEND THE USEFUL LIFE OF STONE. IMMEDIATELY REMOVE MUD AND SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROADS BY BRUSHING OR SWEEPING. FLUSHING SHOULD ONLY BE USED WHEN THE WATER CAN BE DISCHARGED TO A SEDIMENT TRAP OR BASIN. REPAIR ANY BROKEN PAVEMENT IMMEDIATELY.

SPECIFICATION	SIZE
ROCK PAD THICKNESS	6 INCHES
ROCK PAD WIDTH	24 FEET
ROCK PAD LENGTH	100 FEET
ROCK PAD STONE SIZE	D = 2–3 INCHES



STABILIZED CONSTRUCTION ENTRANCE DETAIL
N.T.S.

Fertilizer

Apply a minimum of 1000 pounds per acre of a complete 10-10-10 fertilizer (23 pounds per 1000 square feet) or equivalent during permanent seeding of grasses unless a soil test indicates a different requirement. Incorporate fertilizer and lime (if used) into the top 4-6 inches of the soil by disking or other means where conditions allow. Do not mix the lime and the fertilizer prior to the field application.

Seeding

Loosen the surface of the soil just before broadcasting the seed. Evenly apply seed by the most convenient method available for the type of seed applied and the location of the seeding. Typical application methods include but are not limited to cyclone seeders, rotary spreaders, drop spreaders, broadcast spreaders, hand spreaders, cultipacker seeder, and hydro-seeders. Cover applied seed by raking or dragging a chain or brush mat, and then lightly firm the area with a roller or cultipacker. Do not roll seed that is applied with a hydro-seeder and hydro-mulch.

Mulching

Cover all permanent seeded areas with mulch immediately upon completion of the seeding application to retain soil moisture and reduce erosion during establishment of vegetation. Apply the mulch evenly in such a manner that it provides a minimum of 75% coverage. Typical mulch applications include straw, wood fiber, hydromulches, BFM and FGM. Use hydromulches with a minimum blend of 70% wood fibers.

The most commonly accepted mulch used in conjunction with permanent seeding is small grain straw. Select straw that is dry and free from mold damage and noxious weeds. The straw may need to be anchored with netting or asphalt emulsions to prevent it from being blown or washed away. Apply straw mulch by hand or machine at the rate 2 tons per acre (90 pounds per 1000 square feet). Frequent inspections are necessary to check that conditions for growth are good.

Temporary Seeding

Species	Lbs/Ac	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Sandy, Droughty Sites													
Browntop Millet	40 lbs./ac.												
Rye, Grain	56 lbs./ac.												
Ryegrass	50 lbs./ac.												
Well drained, clayey/loamey Sites													
Browntop Millet or Japanese Millet	40 lbs./ac.												
Rye, Grain or Oats	56 lbs./ac. 75 lbs./ac.												
Ryegrass	50 lbs./ac.												

Permanent Seeding

Species	Lbs/Ac	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Sandy, Droughty Sites													
Browntop Millet Dahlagrass	10 lbs./ac. 40 lbs./ac.												
Browntop Millet Bahiagrass Sericea Lespedeza	10 lbs./ac. 30 lbs./ac. 40 lbs/ac.												
Browntop Millet Atlantic Coastal Panicgrass	10 lbs./ac. 15 lbs./ac. PLS												
Browntop Millet Switchgrass (Alamo) Little Bluestem Sericea Lespedeza	10 lbs./ac. 8 lbs./ac. PLS 4 lbs./ac. 20 lbs./ac.												
Browntop Millet Weeping Lovegrass	10 lbs./ac. 8 lbs./ac.												
Well drained, clayey/loamey Sites													
Browntop Millet Bahiagrass	10 lbs./ac. 40 lbs./ac.												
Rye, Grain Bahiagrass Clover, Crimson (Annual)	10 lbs./ac. 40 lbs./ac. 5 lbs./ac.												
Browntop Millet Dahlagrass Sericea lespedeza	10 lbs./ac. 30 lbs./ac. 40 lbs./ac.												
Browntop Millet Bermuda, Common Sericea lespedeza	10 lbs./ac. 10 lbs./ac. 40 lbs./ac.												
Browntop Millet Bermuda, Common Kobe Lespedeza (Annual)	10 lbs./ac. 12 lbs./ac. 10 lbs./ac.												
Browntop Millet Bahiagrass Bermuda, Common Sericea lespedeza	10 lbs./ac. 20 lbs./ac. 6 lbs./ac. 40 lbs./ac.												
Browntop Millet Switchgrass Little Bluestem Indiangrass	10 lbs./ac. 8 lbs./ac. PLS 3 lbs./ac. PLS 3 lbs./ac. PLS												

Specifications for Sodding, Fertilizing, and Seeding

General

1. At locations indicated on the plans, in the special provisions, or where designated by the Engineer, the Contractor shall prepare seed beds, furnish and spread fertilizers, and furnish and plant the seed specified herein on disturbed areas.
2. Any disturbed areas, which had established grass (sod), must be replaced with sod. Any seeding in these areas shall be considered temporary.
3. The Contractor shall water seeded areas and sodded areas until grass has become established.

Construction Materials

4. Fertilizer shall be standard commercial 10–08–6 or 10–7–4 grade, uniform in composition, free flowing and suitable for application with approved equipment, delivered to the site in bags or other convenient containers, each fully labeled, conforming to applicable State Laws.
5. Lime shall be ground limestone containing all of the finer particles obtained in the grinding process and ground sufficiently fine so that not less than 80 per cent will pass through a No. 8 sieve. The calcium carbonate equivalent must be at least 80 per cent. One or both must be greater than 80 so that the multiplication of the per cent of calcium carbonate equivalent by the per cent of material passing through the No. 8 sieve will be equal to or be in excess of 0.72. The moisture content at the time of shipment must not exceed 8 per cent.
6. The classes of Seeding Mixture shall consist of one or more of the classes listed below. Seeding Mixtures form the specified class shall be designated by the Engineer, based on the season of the year when seeding operations are performed.

Construction Methods

7. After the areas to be seeded have been brought to the proper grades and cleared on all stones, boulders and debris, the areas shall be thoroughly tilled to a depth of at least three (3) inches by discing, harrowing or other approved methods until the condition of the soil is acceptable to the Engineer. If, as a result of a rain, a crust is formed over the prepared surface, the surface shall again be placed in a suitable condition for planting.
8. Fertilizer shall be distributed uniformly at the rate of four hundred (400) pounds per acre, over the area indicated to be fertilized, and shall be incorporated into the soil to a depth of at least three (3) inches by discing, harrowing or other approved methods acceptable to the Engineer. The incorporation of fertilizer may be a part of the tillage operation specified above.
9. Lime shall be distributed uniformly on all areas to be fertilized at the rate of one ton to one (1) acre and shall be incorporated in the soil to a depth of at least three (3) inches by discing, harrowing, or other methods acceptable to the Engineer, immediately following or simultaneously with the incorporation of the fertilizer.
10. Seeding Methods –No seed shall be sown during high winds or when the ground is not in a proper condition for seeding or shall any seed to sown until the purity test has been completed for the seeds to be used, and shows that the seed meets the noxious weed free requirements. Equipment shall be operated in a manner to insure complete coverage of the entire area to be seeded. When seed or fertilizer is applied with a hydraulic seeder, the rate of application shall be not less than 1,000 gallons of slurry per acre. This slurry shall contain the proper quantity of seed or fertilizer specified per acre. When using a hydraulic seeder, the fertilizer and seed shall be applied in two separate operations.
11. Within 12 hours, all seed areas, shall be rolled at right angles to the run–off with an approved type roller or cultipacker to compact the seed bed and place the seed in contact with the soil. On areas seeded with a hydraulic seeder, rolling shall not be required.
12. The optimum depth for seeding shall be one quarter (1/4) inch.
13. All legumes shall be inoculated with the proper bacteria in the amounts and manner recommended by the manufacturer of the inoculant before sowing or being mixed with other seeds for sowing. The inoculant shall be furnished by the Contractor and shall be approved by the Engineer. The seed shall be sown as soon as possible after inoculation and seed that has been standing more than five hours after inoculation shall be reinoculated before sowing. If legumes are applied by hydro seeder, three times the normal amount of inoculant shall be The Contractor shall furnish the inoculant and the cost of furnishing some shall be included in the contract unit price per acre for seeding of the class specified.
14. The classes of seeding mixtures shall consist of one or more of the classes listed. Seeding Mixtures from the specified classes shall be designated by the Engineer, based on the season of the year when seeding operations are performed.
15. Replacement of sodded areas –At locations specified, or shown on the plans, or designated by the Engineer, the Contractor shall remove and carefully store the upon compaction of the trench in a manner satisfactory to the Engineer, the sod shall be replace in a neat, workman like manner, over a minimum of two (2) inches of topsoil. Any deficiency in sod necessary to restore the surface to a condition comparable to that which existed before construction operations began will be furnished by the Contractor unless other specified.

ISSUE DATE:	CONSTR:	BIDS:	PERMITS: 11/05/2020
REV. #	DATE	DESCRIPTION	
1			
2			
3			
4			
5			
6			

SOUTH CAROLINA PROFESSIONAL ENGINEER NO. 32702 MATTHEW THOMAS HINES

SOUTH CAROLINA DENNIS CORPORATION NO. 3103 CERTIFICATE OF AUTHORIZATION

ENGINEER	DESIGNER	CHECKED
D. HAMRICK	S. SAUNDERS	M. HINES

NOTES AND DETAILS (1 OF 4)

DENNIS CORPORATION

IMPROVEMENTS TO INDIAN HUT ROAD AND AMOS ROAD FOR GEORGETOWN COUNTY

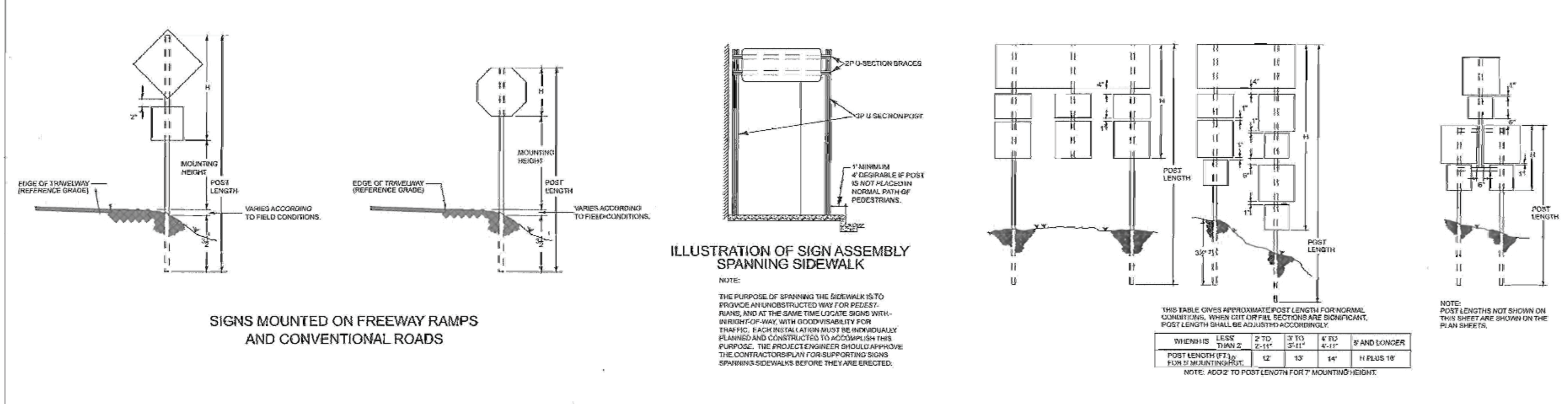
GEORGETOWN COUNTY, SOUTH CAROLINA

PROJECT ID G0004.31

SCALE N.T.S.

SHEET ND-1

FLAT SHEET SIGN MOUNTING DETAILS



SIGNS MOUNTED ON FREEWAY RAMPS AND CONVENTIONAL ROADS

ILLUSTRATION OF SIGN ASSEMBLY SPANNING SIDEWALK

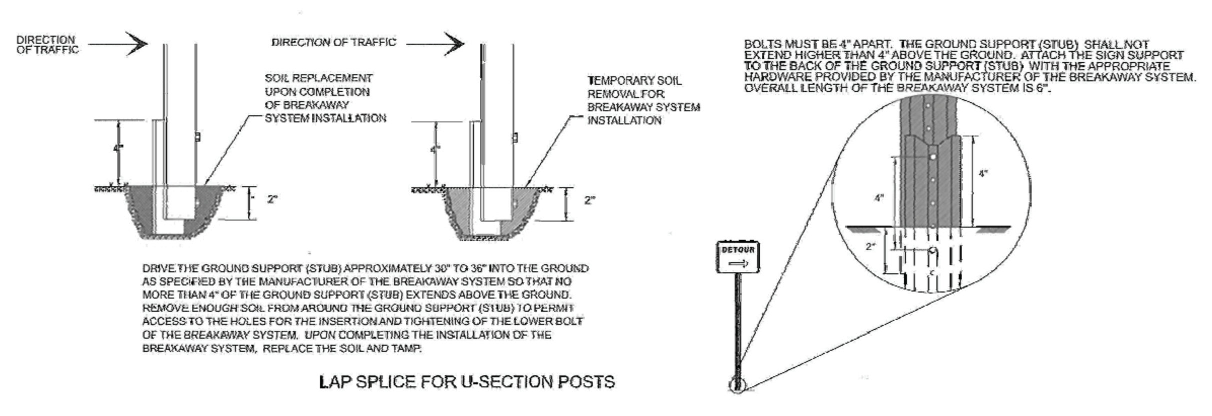
NOTE:

THE PURPOSE OF SPANNING THE SIDEWALK IS TO PROVIDE AN UNOBSTRUCTED WAY FOR PEDESTRIANS, AND AT THE SAME TIME LOCATE SIGNS WITHIN RIGHT-OF-WAY, WITH GOOD VISABILITY FOR TRAFFIC. EACH INSTALLATION MUST BE INDIVIDUALLY PLANNED AND CONSTRUCTED TO ACCOMPLISH THIS PURPOSE. THE PROJECT ENGINEER SHOULD APPROVE THE CONTRACTORS PLAN FOR SUPPORTING SIGNS SPANNING SIDEWALKS BEFORE THEY ARE ERECTED.

THIS TABLE GIVES APPROXIMATE POST LENGTH FOR NORMAL CONDITIONS. WHEN CUT OR FILL SECTIONS ARE SIGNIFICANT, POST LENGTH SHALL BE ADJUSTED ACCORDINGLY.

WHEN H IS	LESS THAN 2'	2' TO 2'-11"	3' TO 3'-11"	4' TO 4'-11"	5' AND LONGER
POST LENGTH (FT.) FOR 5' MOUNTING HGT.	12'	13'	14'	H PLUS 10'	

NOTE: ADD 2' TO POST LENGTH FOR 7' MOUNTING HEIGHT.

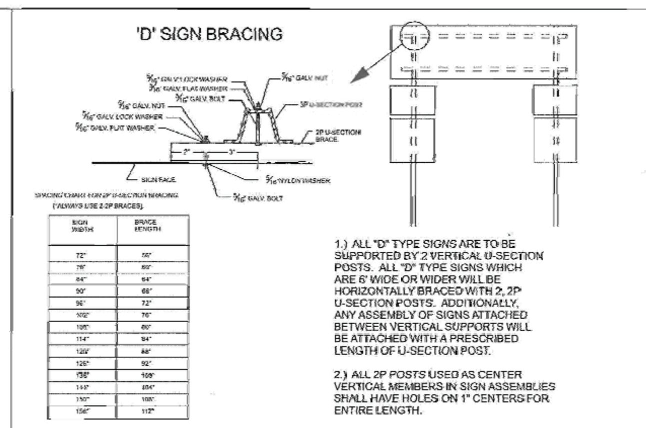


DRIVE THE GROUND SUPPORT (STUB) APPROXIMATELY 30" TO 36" INTO THE GROUND AS SPECIFIED BY THE MANUFACTURER OF THE BREAKAWAY SYSTEM SO THAT NO MORE THAN 4" OF THE GROUND SUPPORT (STUB) EXTENDS ABOVE THE GROUND. REMOVE ENOUGH SOIL FROM AROUND THE GROUND SUPPORT (STUB) TO PERMIT ACCESS TO THE HOLES FOR THE INSERTION AND TIGHTENING OF THE LOWER BOLT OF THE BREAKAWAY SYSTEM. UPON COMPLETING THE INSTALLATION OF THE BREAKAWAY SYSTEM, REPLACE THE SOIL AND TAMP.

LAP SPLICE FOR U-SECTION POSTS

BOLTS MUST BE 4" APART. THE GROUND SUPPORT (STUB) SHALL NOT EXTEND HIGHER THAN 4" ABOVE THE GROUND. ATTACH THE SIGN SUPPORT TO THE BACK OF THE GROUND SUPPORT (STUB) WITH THE APPROPRIATE HARDWARE PROVIDED BY THE MANUFACTURER OF THE BREAKAWAY SYSTEM. OVERALL LENGTH OF THE BREAKAWAY SYSTEM IS 6".

'D' SIGN BRACING



1.) ALL "D" TYPE SIGNS ARE TO BE SUPPORTED BY 2 VERTICAL U-SECTION POSTS. ALL "D" TYPE SIGNS WHICH ARE 6' WIDE OR WIDER WILL BE HORIZONTALLY BRACED WITH 2, 2P U-SECTION POSTS. ADDITIONALLY, ANY ASSEMBLY OF SIGNS ATTACHED BETWEEN VERTICAL SUPPORTS WILL BE ATTACHED WITH A PRESCRIBED LENGTH OF U-SECTION POST.

2.) ALL 2P POSTS USED AS CENTER VERTICAL MEMBERS IN SIGN ASSEMBLIES SHALL HAVE HOLES ON 1" CENTERS FOR ENTIRE LENGTH.

SIZE & LENGTH OF U-SECTION POSTS FOR SINGLE SIGNS

POST QUANTITY, SIZE & LENGTH FOR INSTALLATIONS HAVING MORE THAN ONE SIGN ARE SHOWN ON THE PLANS.

SIGN NO.	NO. OF POSTS	POST SIZES 5' MTG. HT. LBS./FT.	5' MTG. HT. LGTH.	7' MTG. HT. LBS./FT.	7' MTG. HT. LGTH.
R1-1-24	1	3P	12	3P	14
R1-1-30	1	3P	12	3P	14
R1-1-48	2	3P	14	3P	16
R1-2-36	1	3P	12	3P	14
R1-2-48	2	3P	13	3P	15
R2-1-24	1	3P	12	3P	14
R2-5c-24	1	3P	12	3P	14
R2-5c-48	2	3P	15	3P	17
R2-6-24	1	3P	12	3P	14
R4-1-24	1	3P	12	3P	14
R4-2-24	1	3P	12	3P	14
R4-3-24	1	3P	12	3P	14
R4-3-36	2	3P	14	3P	16
R4-4-42	2	3P	14	3P	16
R5-1-30	1	3P	12	3P	14
R5-1-36	2	3P	13	3P	15
R5-1a-36	2	3P	12	3P	14
R5-10a-30	1	3P	13		
R6-1-36	1	3P	10	3P	12
R8-4-36	2	3P	12	3P	14
R8-8-42	2	3P	12	3P	14

SIGN NO.	NO. OF POSTS	POST SIZES 5' MTG. HT. LBS./FT.	5' MTG. HT. LGTH.	7' MTG. HT. LBS./FT.	7' MTG. HT. LGTH.
R11-1-24	1	3P	12	3P	14
R11-1-36	2	3P	14	3P	16
R11-1-48	2	3P	12	3P	14
R11-5-36	2	3P	12	3P	14
R11-6-48	2	3P	12	3P	14
R11-7-30	1	3P	12	3P	14
R18-1-30	1	3P	13	3P	15
W1-1-30	1	3P	13	3P	15
W1-1-36	1	3P	14	3P	14
W1-2-30	1	3P	13	3P	15
W1-2-36	1	3P	14	3P	16
W1-3-30	1	3P	13	3P	15
W1-3-36	1	3P	14	3P	16
W1-4-30	1	3P	13	3P	15
W1-4-36	1	3P	14	3P	16
W1-5L-30	1	3P	13	3P	15
W1-6-48	2	3P	12	3P	14
W1-7-48	2	3P	12	3P	14

SIGN NO.	NO. OF POSTS	POST SIZES 5' MTG. HT. LBS./FT.	5' MTG. HT. LGTH.	7' MTG. HT. LBS./FT.	7' MTG. HT. LGTH.
W2-1-24	1	3P	12	3P	14
W2-1-30	1	3P	13	3P	15
W2-1-36	1	3P	14	3P	16
W2-2-24	1	3P	12	3P	14
W2-5-30	1	3P	13	3P	15
W3-1-36	1	3P	14	3P	16
W3-2-36	1	3P	14	3P	16
W5-1-36	1	3P	14	3P	16
W9-1-36	1	3P	14	3P	16
W9-2-36	1	3P	14	3P	16
W8-3-30	1	3P	13	3P	15
W14-1-24	1	3P	12	3P	14
W14-1-30	1	3P	13	3P	15
W6-4-48	2	3P	14	3P	16
W10-1-30	1	3P	13	3P	15

SIGN NO.	NO. OF POSTS	POST SIZES 5' MTG. HT. LBS./FT.	5' MTG. HT. LGTH.	7' MTG. HT. LBS./FT.	7' MTG. HT. LGTH.
THE FOLLOWING TO BE MOUNTED AT 4' HT.					
D10-1-12-XX	1	2P	10		
D10-2-12-XX	1	2P	11		
D10-3-12-XX	1	2P	12		
THE FOLLOWING TO BE MOUNTED AT 5' HT.					
R1-2-60	2	3P			
R1-3-48	2	3P			
R8-4-48	2	3P			
R11-1-48	2	3P			
W13-2-48	2	3P			

NOTE:

POST LENGTHS SHOWN IN THIS CHART ARE GENERAL AND SHOULD BE USED FOR BID PURPOSES ONLY. CONTRACTOR IS REQUIRED TO VERIFY FIELD CONDITIONS TO DETERMINE EXACT LENGTHS OF POSTS NEEDED.

DELINEATOR POSTS SHALL BE 2P U-SECTION POST 7 1/2' LONG.

REFERENCES

SIGNING AND MARKING ENGINEER

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER NO. 23845 MARK H. ANTHONY

SIGNATURE

2-11-08

DATE

#	DATE	CHK	DESCRIPTION
6			
5			
4			
3			
2			
1			
0			

SCDOT

SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS OFFICE
955 PARK STREET
ROOM 405
COLUMBIA, SC 29201

STANDARD DRAWING

FLAT SHEET MOUNTING DETAILS

651-110-00

EFFECTIVE LETTING DATE MAY 2008

REFERENCES

WORK ZONE TRAFFIC CONTROL ENGINEER

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER NO. 24242 WILLIE E. McCONNELL, JR

SIGNATURE

8/2/12

DATE

#	DATE	CHK	DESCRIPTION
6			
5			
4			
3			
2	1-5-12	JCS	GENERAL UPDATE
1	7-1-10	JCS	4" NOTE UPDATE
0	8-13-07	JCS	DRAWING NO. UPDATE

SCDOT

SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS OFFICE
955 PARK STREET
ROOM 405
COLUMBIA, SC 29201

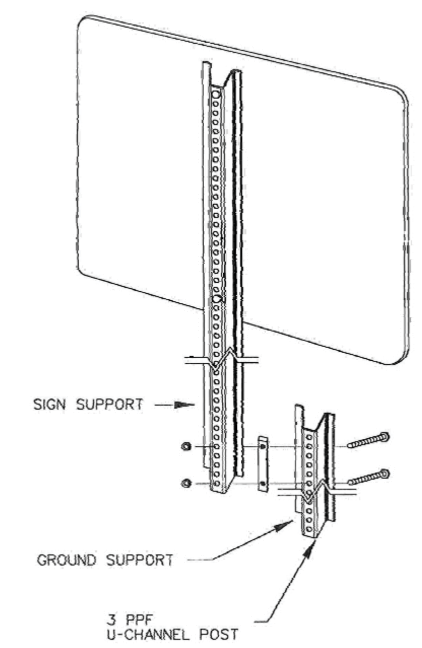
STANDARD DRAWING

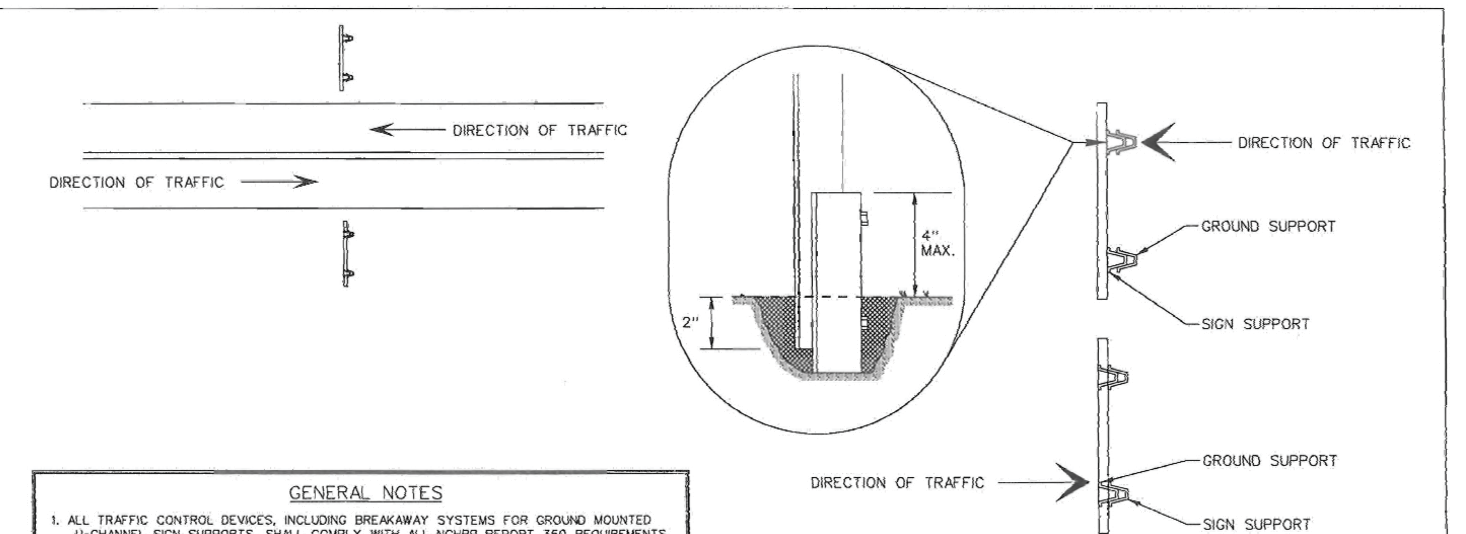
CONSTRUCTION SIGNING GROUND MOUNTED ASSEMBLY U-CHANNEL POSTS - BREAKAWAY INSTALLATION

605-005-01

EFFECTIVE LETTING DATE JAN. 2013

THIS DRAWING IS NOT TO SCALE



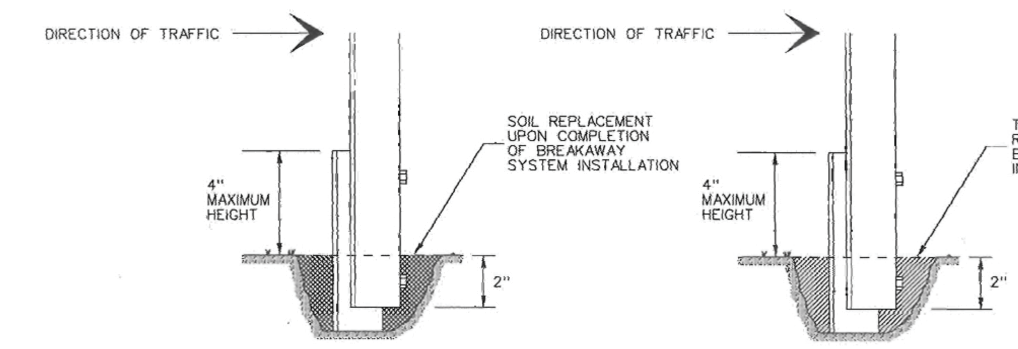


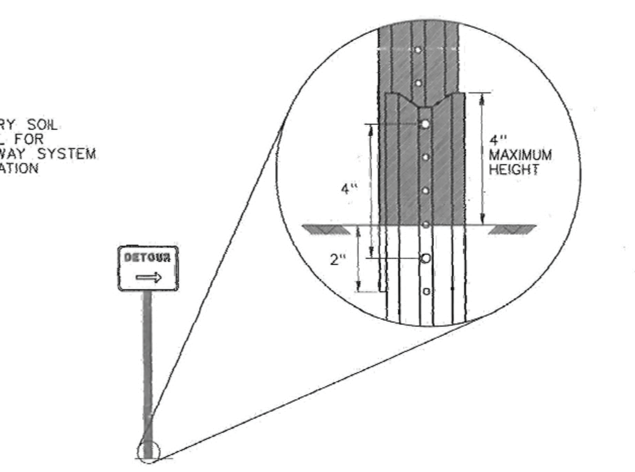
GENERAL NOTES

1. ALL TRAFFIC CONTROL DEVICES, INCLUDING BREAKAWAY SYSTEMS FOR GROUND MOUNTED U-CHANNEL SIGN SUPPORTS, SHALL COMPLY WITH ALL NCHRP REPORT 350 REQUIREMENTS AND SHALL REQUIRE APPROVAL BY THE DEPARTMENT. ONLY THOSE TRAFFIC CONTROL DEVICES INCLUDED ON THE "APPROVED PRODUCTS LIST FOR TRAFFIC CONTROL DEVICES IN WORK ZONES" ARE CONSIDERED ACCEPTABLE FOR USE. THIS LIST MAY BE ACCESSED ON THE DEPARTMENT'S WEB SITE AT: www.scdot.org .
2. ALL BREAKAWAY SYSTEMS FOR GROUND MOUNTED U-CHANNEL SIGN SUPPORTS SHALL COMPLY WITH THE AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARES AND TRAFFIC SIGNALS", LATEST EDITION INCLUDING THE LATEST INTERIM REVISIONS, IN ACCORDANCE WITH THE REQUIREMENTS OF NCHRP REPORT 350.
3. ALL BREAKAWAY SYSTEM HARDWARE, INCLUDING BOLTS, NUTS, WASHERS AND SPACERS, ILLUSTRATED ON THIS TYPICAL TRAFFIC CONTROL STANDARD DRAWING ARE TYPICAL AND MAY VARY IN SIZE, NUMBER, CONFIGURATION AND OVERALL DESIGN IN ACCORDANCE WITH EACH MANUFACTURER'S SPECIFIC DESIGN.
4. THESE ILLUSTRATIONS ARE INTENDED FOR INFORMATION ONLY. SIMILARITY BETWEEN THESE ILLUSTRATIONS AND ANY SPECIFIC DEVICE OR SYSTEM IS COINCIDENTAL AND IS NOT INTENDED AS EITHER A RECOMMENDATION OR AN ENDORSEMENT OF A SPECIFIC DEVICE OR DESIGN.

INSTALL THE BREAKAWAY SYSTEM TO FUNCTION IN ACCORDANCE WITH THE DIRECTION OF TRAFFIC IN THE ADJACENT TRAVEL LANE. ATTACH THE SIGN SUPPORT TO THE SIDE OF THE GROUND SUPPORT (STUB) THAT WILL LOCATE THE GROUND SUPPORT (STUB) BETWEEN THE SIGN SUPPORT AND THE APPROACHING TRAFFIC IN THE ADJACENT TRAVEL LANE.

BOLTS MUST BE 4" APART. THE GROUND SUPPORT (STUB) SHALL NOT EXTEND HIGHER THAN 4" ABOVE THE GROUND. ATTACH THE SIGN SUPPORT TO THE GROUND SUPPORT (STUB) WITH THE APPROPRIATE HARDWARE PROVIDED BY THE MANUFACTURER OF THE BREAKAWAY SYSTEM. OVERALL LENGTH OF THE BREAKAWAY SYSTEM IS APPROXIMATELY 6".





DRIVE THE GROUND SUPPORT (STUB) APPROXIMATELY 30" TO 36" INTO THE GROUND AS SPECIFIED BY THE MANUFACTURER OF THE BREAKAWAY SYSTEM SO THAT NO MORE THAN 4" OF THE GROUND SUPPORT (STUB) EXTENDS ABOVE THE GROUND. REMOVE ENOUGH SOIL FROM AROUND THE GROUND SUPPORT (STUB) TO PERMIT ACCESS TO THE HOLES FOR THE INSERTION AND TIGHTENING OF THE LOWER BOLT OF THE BREAKAWAY SYSTEM. UPON COMPLETING THE INSTALLATION OF THE BREAKAWAY SYSTEM, REPLACE THE SOIL AND TAMP.

PAVEMENT MARKING TYPICAL LINE PATTERNS AND RAISED MARKER PLACEMENT

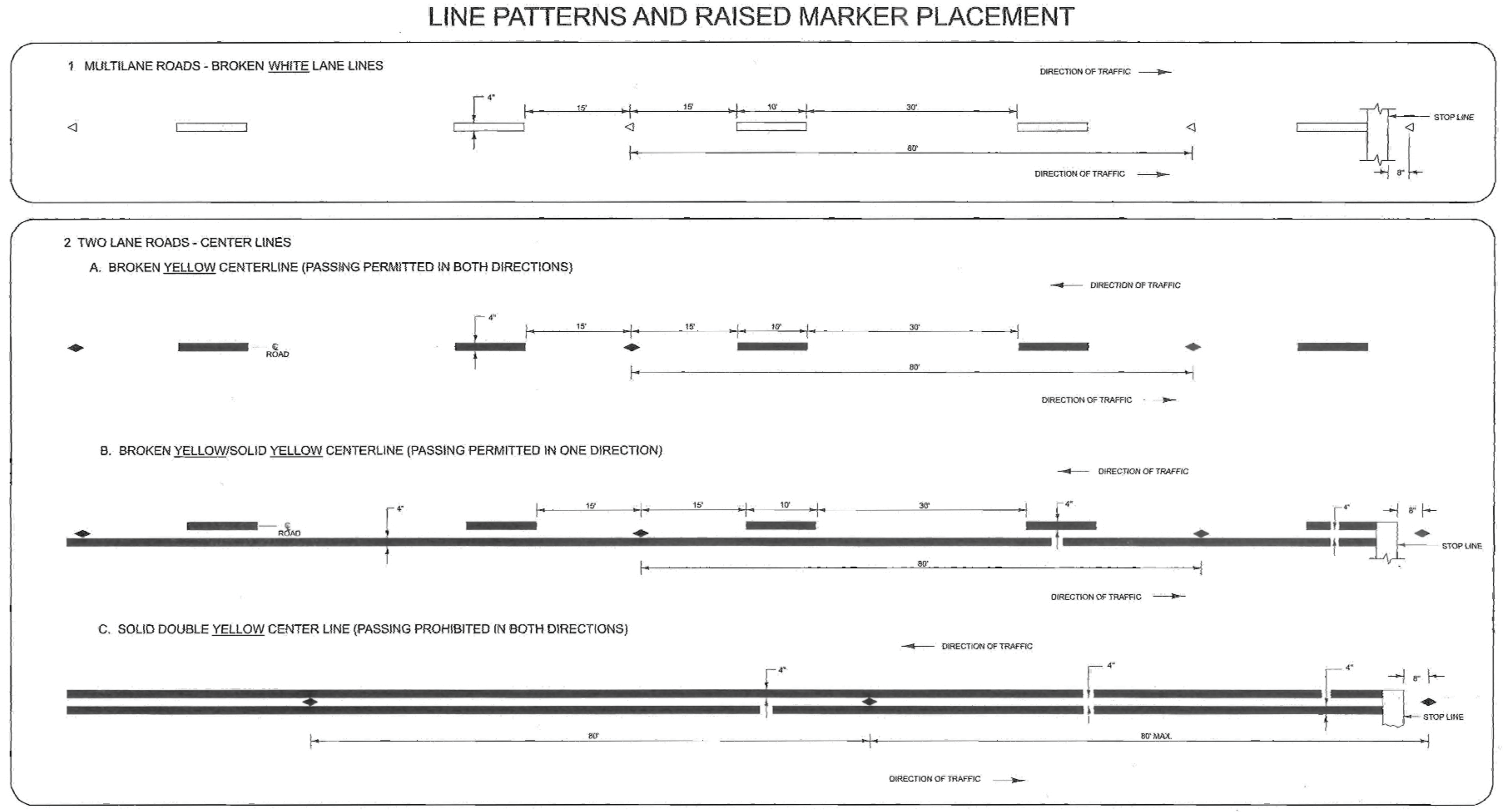
1 MULTILANE ROADS - BROKEN WHITE LANE LINES

2 TWO LANE ROADS - CENTER LINES

A. BROKEN YELLOW CENTERLINE (PASSING PERMITTED IN BOTH DIRECTIONS)

B. BROKEN YELLOW/SOLID YELLOW CENTERLINE (PASSING PERMITTED IN ONE DIRECTION)

C. SOLID DOUBLE YELLOW CENTER LINE (PASSING PROHIBITED IN BOTH DIRECTIONS)



IDENTIFICATION KEY FOR RAISED MARKERS:

◁ WHITE MONODIRECTIONAL

◆ YELLOW BI-DIRECTIONAL

ALL MARKERS ARE TO BE SURFACE MOUNTED

THIS DRAWING IS NOT TO SCALE

REFERENCES

SIGNING AND MARKING ENGINEER

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER NO. 23845 MARK H. ANTHONY

SIGNATURE

2-5-08

DATE

#	DATE	CHK	DESCRIPTION
6			
5			
4			
3			
2			
1			
0			

SCDOT

SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS OFFICE
955 PARK STREET
ROOM 405
COLUMBIA, SC 29201

STANDARD DRAWING

PAVEMENT MARKING TYPICAL LINE PATTERNS AND RAISED MARKER PLACEMENT

630-205-00

EFFECTIVE LETTING DATE MAY 2008

REFERENCES

WORK ZONE TRAFFIC CONTROL ENGINEER

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER NO. 24242 WILLIE E. McCONNELL, JR

McConnell, Will E
2018.06.22
14:34:15
-04'00'

SIGNATURE

DATE

#	DATE	CHK	DESCRIPTION
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4			
3			
2	05-03-18	WEM	UPDATE TITLE UPDATE SIGNS
1	1-9-12	JCS	GENERAL UPDATE
0	8-13-07	JCS	DRAWING NO. UPDATE

SCDOT

SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS OFFICE
955 PARK STREET
ROOM 405
COLUMBIA, SC 29201

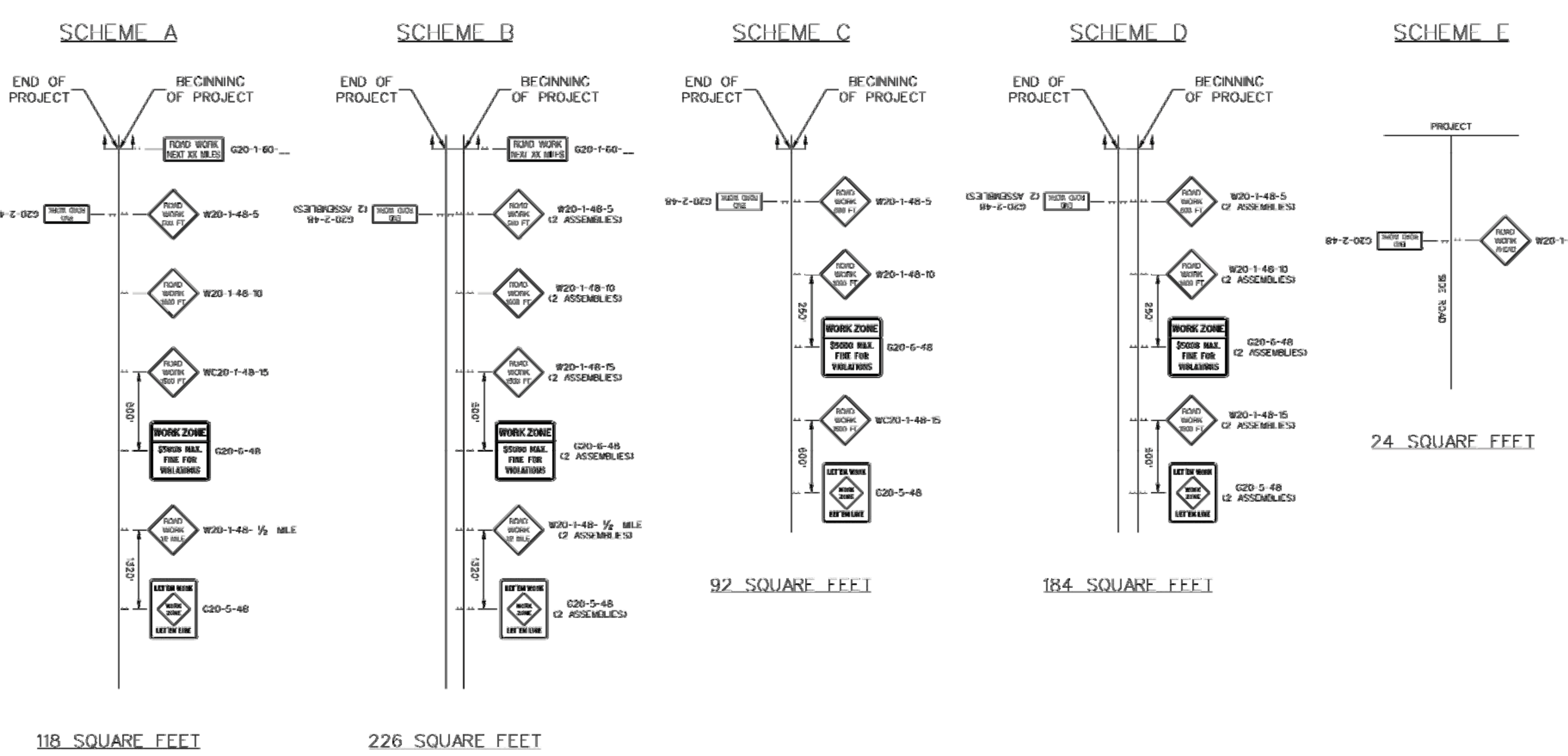
STANDARD DRAWING

CONSTRUCTION SIGNING PERMANENT WORK ZONE $5000 FINE PRIMARY ROUTES

605-010-01

EFFECTIVE LETTING DATE JAN 2019

THIS DRAWING IS NOT TO SCALE



118 SQUARE FEET

226 SQUARE FEET

92 SQUARE FEET

184 SQUARE FEET

24 SQUARE FEET

GENERAL NOTES

1. ALL SIGN LOCATIONS ARE TO BE MEASURED FROM THE WORK AREA. THE WORK LIMITS FOR THE PROJECT WILL BE DETERMINED BY THE ENGINEER AND AS INDICATED IN THE CONTRACT.
2. INSTALL ALL PERMANENT CONSTRUCTION SIGNS ON APPROVED GROUND MOUNTED SIGN POSTS UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT. UTILIZE EITHER 3 PPF U-CHANNEL OR SQUARE STEEL TUBE POSTS FOR THESE INSTALLATIONS. INSTALL EACH PERMANENT CONSTRUCTION SIGN ASSEMBLY NO LESS THAN 2 FEET FROM THE NEAR EDGE OF A PAVED SHOULDER OR THE FACE OF A CURB OR 6-12 FEET FROM THE NEAR EDGE OF AN ADJACENT TRAVEL LANE WITHOUT THE PRESENCE OF A PAVED SHOULDER OR A CURB & GUTTER TO THE NEAREST EDGE OF THE SIGN ASSEMBLY. ALSO, MOUNT EACH PERMANENT CONSTRUCTION SIGN ASSEMBLY TO PROVIDE A MOUNTING HEIGHT OF NO LESS THAN 7 FEET OR NO GREATER THAN 8 FEET FROM THE BOTTOM EDGE OF THE PRIMARY SIGN TO THE GRADE ELEVATION OF THE NEAR EDGE OF THE ADJACENT TRAVEL LANE. HOWEVER, IF A SECONDARY SIGN IS MOUNTED BELOW THE PRIMARY SIGN, MOUNT THE SIGN ASSEMBLY TO PROVIDE A MOUNTING HEIGHT OF NO LESS THAN 6 FEET FROM THE BOTTOM EDGE OF THE SECONDARY SIGN TO THE GRADE ELEVATION OF THE NEAR EDGE OF THE ADJACENT TRAVEL LANE. PROVIDE AND UTILIZE SPECIAL SIGN MOUNTING DEVICES AND HARDWARE AS NECESSARY FOR INSTALLING PERMANENT CONSTRUCTION SIGN ASSEMBLIES IN AREAS WHERE CONCRETE MEDIAN BARRIER WALLS, BRIDGE PARAPET WALLS OR DOUBLEFACED GUARDRAIL ARE PRESENT.
3. MOUNT ALL FLAT SHEET PERMANENT CONSTRUCTION SIGNS STRAIGHT AND LEVEL AND WITH THE FACE OF THE SIGNS PERPENDICULAR TO THE SURFACE OF THE ROADWAY.
4. REFLECTORIZE ALL ORANGE PERMANENT CONSTRUCTION SIGNS AND ANY ORANGE AREAS OF MULTICOLORED PERMANENT CONSTRUCTION SIGNS WITH A FLUORESCENT ORANGE COLORED PRISMATIC RETROREFLECTIVE SHEETING. REFLECTORIZE ALL WHITE PERMANENT CONSTRUCTION SIGNS AND ANY WHITE AREAS OF MULTICOLORED PERMANENT CONSTRUCTION SIGNS WITH A WHITE COLORED PRISMATIC RETROREFLECTIVE SHEETING.
5. SPACINGS INDICATED ARE FOR NORMAL CONDITIONS; ADJUSTMENTS MAY BE REQUIRED DUE TO HORIZONTAL AND/OR VERTICAL ALIGNMENTS OR OTHER SIGHT DISTANCE RESTRICTIONS.
6. ALL TRAFFIC CONTROL DEVICES SHALL COMPLY WITH ALL NCHRP REPORT 350 REQUIREMENTS AND SHALL REQUIRE APPROVAL BY THE DEPARTMENT. ONLY THOSE TRAFFIC CONTROL DEVICES INCLUDED ON THE "APPROVED PRODUCTS LIST FOR TRAFFIC CONTROL DEVICES IN WORK ZONES" ARE CONSIDERED ACCEPTABLE FOR USE. THIS LIST MAY BE ACCESSED ON THE DEPARTMENT'S WEB SITE AT: www.scdot.org .
7. THE DEPARTMENT RESERVES THE RIGHT TO RESTRICT WORK OPERATIONS AND/OR WITHHOLD THE MONTHLY ESTIMATE IF THE TRAFFIC CONTROL IS NOT PROPERLY INSTALLED AND MAINTAINED AS DIRECTED BY THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, THE STANDARD DRAWINGS, THE PLANS AND/OR THE ENGINEER.
8. WHEN WORK IS INACTIVE FOR 3 OR MORE CONSECUTIVE DAYS, COVER THE "WORK ZONE $5000 MAX FINE" SIGN (G20-6-48) WITH AN OPAQUE MATERIAL IN ACCORDANCE THE APPROVED METHODS FOR COVERING SIGNS AS SPECIFIED IN THE SPECIFICATIONS.

ISSUE DATE:	CONSTR:	BIDS:	PERMITS: 11/05/2020

REV. #	DATE	DESCRIPTION
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SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER NO. 32702 MATTHEW THOMAS HINES 12/14/20

SOUTH CAROLINA DENNIS CORPORATION NO. 3103 CERTIFICATE OF AUTHORIZATION

ENGINEER D. HAMRICK | DESIGNER S. SAUNDERS | CHECKED M. HINES

DENNIS CORPORATION

NOTES AND DETAILS (2 OF 4)

IMPROVEMENTS TO INDIAN HUT ROAD AND AMOS ROAD FOR GEORGETOWN COUNTY

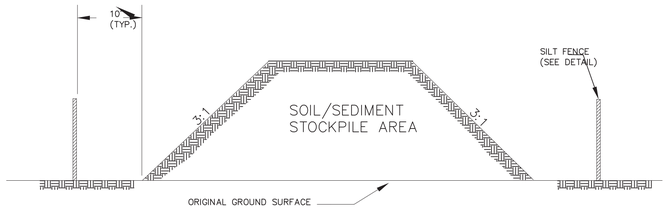
GEORGETOWN COUNTY, SOUTH CAROLINA

PROJECT ID G0004.31

SCALE N.T.S.

SHEET ND-2

TEMPORARY STOCKPILE AREA



NOTES:

1. SILT FENCE TO EXTEND AROUND ENTIRE PERIMETER OF STOCKPILE, OR IF STOCKPILE AREA IS LOCATED ON/NEAR A SLOP THE SILT FENCE IS TO EXTEND ALONG CONTOURS OF THE DOWN-GRADIENT AREA.
2. IF STOCKPILE IS TO REMAIN FOR MORE THAN 14 DAYS, TEMPORARY STABILIZATION MEASURES MUST BE IMPLEMENTED.
3. SILT FENCE SHALL BE MAINTAINED UNTIL STOCKPILE AREA HAS EITHER BEEN REMOVED OR PERMANENTLY STABILIZED.
4. THE KEY TO FUNCTIONAL TEMPORARY STOCKPILE AREAS IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE, AND REGULAR SEDIMENT REMOVAL.

EROSION CONTROL BLANKETS
Description
Temporary erosion control blankets (ECBs) are products composed primarily of biologically, photochemically or otherwise degradable constituents such as wheat straw, coconut fiber, or aged curled excelsior wood product with longevity of approximately 1- to 3-years.

When and where to use it
ECBS are used for the temporary stabilization of soil immediately following seeding until the vegetative cover has grown and becomes established. ECBs provide temporary protection by degrading over time as the vegetation becomes established. Some products are effective for a few months while others degrade slowly and are effective for up to 3-years.

ECB categories
Class A (slope applications only)
Class B (channel applications only).

Class A ECBs are for slope applications only.
Applicable for slopes 2h:1v or flatter only. Slopes greater than 2h:1v require turf reinforcement matting (TRM).

Class B ECBs are for channel applications.
Applicable for channels and concentrated flow areas with a maximum calculated shear stress J than 1.75 lb/ft2. channels and concentrated flow areas with design shear stresses greater than 1.75 lb/ft2 require TRM

All acceptable class A and class B temporary erosion control blankets consisting of straw, coconut, or straw-coconut blends meet the following requirements:.

Utilize non-organic, photodegradable or biodegradable polypropylene netting.

Consist of double netted mattting, defined as matting with netting on both sides of the blanket. The top netting is egradable polypropylene with a maximum mesh opening of 0.75 inches by 0.75. The bottom is degradable polypropylene with a maximum mesh opening of 0.5 inches by 0.5 inches.

Be sewn on center a maximum of 2.0 inches

All acceptable class A and class B temporary erosion control blankets consisting of curled excelsior fibers meet the following requirements:

Utilize non-organic, photodegradable or biodegradable polypropylene netting

Consist of double netted matting. Double netted matting is matting with netting on both sides of the blanket. The degradable polypropylene top netting requires a maximum mesh opening of 1.0-inches by 1.0-inches, while the degradable polypropylene bottom netting requires a maximum mesh opening of 1.0-inches by 1.0-inches consist of curled excelsior interlocking fibers with 80% of the fibers a minimum of 6-inches long.

Sewn on center a maximum of 4.0-inches.

Use class A and class B temporary erosion control blankets having the following minimum average roll values (mavr) for physical properties, as derived from quality control testing performed by a geosynthetic accreditation institute - laboratory accreditation program (osa-lap) accredited laboratory:

Minimum mass per unit area (astm d6475) of 6 oz/yd2 (203 g/m2)
Minimum thickness (astm d6525) of 0.25-inches (6 mm)
Minimum initial grab tensile strength (astm d681 6) of 75 x 75 lb/ft . (1 x i kn/m)
Minimum roll width of 48-inches (1.22 m)
For class B channel applications, a minimum unvegetated shear stress of 1.0 lb/ft2 (48 n/m2)
Based on short-term peak flow duration of 0.5 hour is required.

Installation
Grade and compact areas to be protected with ECBs as indicated on the plans. remove large rocks, soil clods, vegetation, and other sharp objects that could keep the ECB from intimate contact with subgrade. Prepare seedbed by loosening 2 to 3 inches of soil above final grade. The proper installation of ECBs is different for each product.
Therefore the recommended installation procedure from the specific manufacturer should be followed. When requested, a manufacturer's representative may be required to be on-site to oversee and approve the initial installation of the ECB. When requested, a letter from the manufacturer approving the contractor installation may be required.

Inspection and maintenance
Inspect areas protected by ECBs for dislocation or failure every 7 calendar days. Conduct regular inspections until grasses are firmly established. Adhere to the pinning or stapling pattern as shown on the manufacturer's installation sheet. If there is evidence that the ECB is not securely fastened to the soil, require extra pins or staples to inhibit the ECB from becoming

CONSTRUCTION SEQUENCE:

1. RECEIVE NPDES COVERAGE FROM SC-DHEC.
2. PRE-CONSTRUCTION MEETING (ON-SITE IF MORE THAN 10 DISTURBED ACRES AND NON-LINEAR).
3. NOTIFY SC-DHEC EQC REGIONAL OFFICE OR OCRM OFFICE 48 HOURS PRIOR TO BEGINNING LAND DISTURBING ACTIVITIES.
4. INSTALLATION OF CONSTRUCTION ENTRANCE(S).
5. CLEARING AND GRUBBING ONLY AS NECESSARY FOR INSTALLATION OF PERIMETER CONTROLS.
6. INSTALLATION OF PERIMETER CONTROLS (E.G. SILT FENCE).
7. CLEARING AND GRUBBING ONLY IN AREAS OF BASINS, TRAPS, PONDS.
8. INSTALLATION OF BASINS, TRAPS, PONDS AND INSTALLATION OF DIVERSIONS TO THOSE STRUCTURES. OUTLET STRUCTURES MUST BE COMPLETELY INSTALLED AS SHOWN ON THE DETAILS BEFORE PROCEEDING TO THE NEXT STEP. AREAS DRAINING TO THESE STRUCTURES CANNOT BE DISTURBED UNTIL THE STRUCTURES AND DIVERSIONS ARE COMPLETELY INSTALLED.
9. CLEARING AND GRUBBING OF SITE OR DEMOLITION.
10. ROUGH GRADING.
11. INSTALLATION OF STORM DRAINAGE SYSTEM AND PLACEMENT OF INLET PROTECTION AS EACH INLET IS INSTALLED.
12. FINE GRADING, PAVING, ETC.
13. PERMANENT/FINAL STABILIZATION.
14. CLEAN-OUT OF DETENTION BASINS THAT WERE USED AS SEDIMENT CONTROL STRUCTURES AND REGRADING OF DETENTION POND BOTTOMS. IF NECESSARY, MODIFY SEDIMENTATION BASIN RISER TO CONVERT TO DETENTION BASIN OUTLET STRUCTURE.
15. REMOVAL OF TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES AFTER ENTIRE AREA DRAINING TO THE STRUCTURE IS FINALLY STABILIZED.
16. PERFORM AS-BUILT SURVEYS OF ALL DETENTION STRUCTURES AND SUBMIT TO DHEC OR MS-4 FOR ACCEPTANCE.
17. SUBMIT NOTICE OF TERMINATION (NOT) TO SC-DHEC AS APPROPRIATE.

REFERENCES
NATIONAL DOCUMENTS
SCDOT DOCUMENTS
MSM
RELATED DRAWINGS & REFERENCES

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER NO. 21242 JAMES W. KENDALL, JR.
SIGNATURE
11/18/2016
DATE

#	DATE	CHK	DESCRIPTION
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SCDOT
SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS OFFICE
955 PARK STREET
ROOM 405
COLUMBIA, SC 29201

STANDARD DRAWING

OUTLET PROTECTION WITH DEFINED CHANNEL

804-310-00
EFFECTIVE LETTING DATE JULY 2017 THIS DRAWING IS NOT TO SCALE

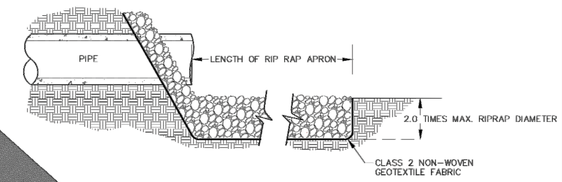
CHART 804-310A SLOPE STABILIZATION RIPRAP PLACEMENT WITH MINIMUM TAILWATER			
MINIMUM CLASS*	D_{50} (FT)	MINIMUM THICKNESS (FT)	OUTSIDE PIPE DIAMETER
A	0.50	1.00	UP TO 24"
B	0.75	1.50	UP TO 84"
C	1.30	2.60	LARGER THAN 84"

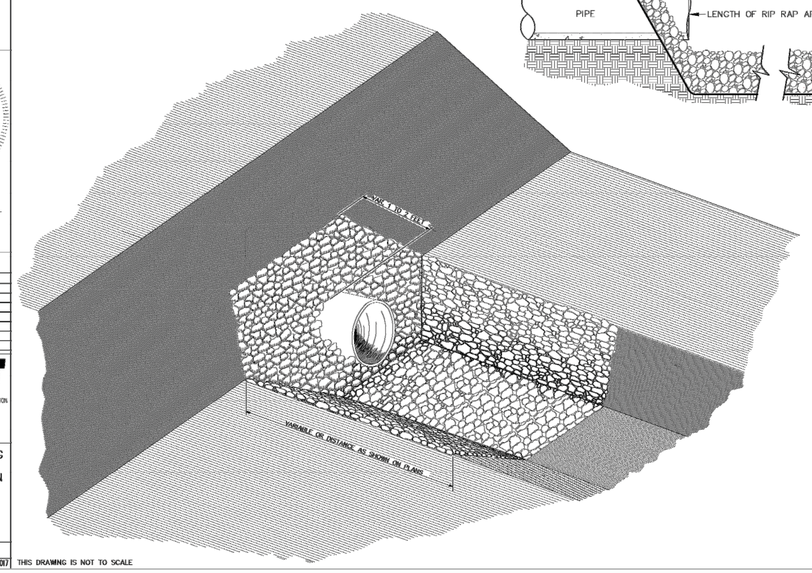
*WHEN RIPRAP CHANNEL IS PRESENT, USE SAME CLASS OF RIPRAP ON SLOPE AS SPECIFIED FOR CHANNEL ON THE PLANS.

NOTES:

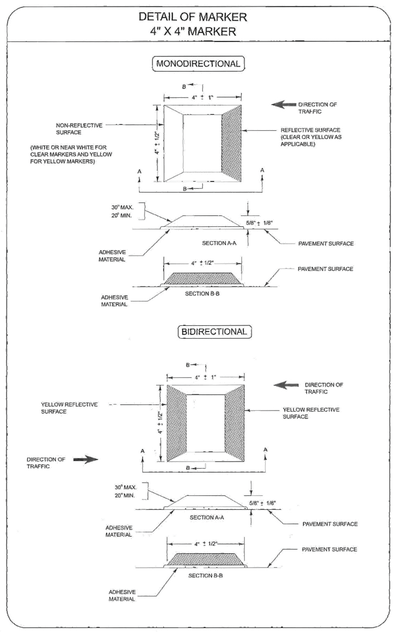
1. CLASS 2 NON-WOVEN GEOTEXTILE FABRIC TO BE USED UNDER RIPRAP.
2. SEE STANDARD DRAWINGS SECTION 719-600-00 FOR ADDITIONAL PIPE END TREATMENT OPTIONS.
3. THE PAY ITEMS SHALL BE:

2031000	UNCLASSIFIED EXCAVATION	CY
8041010	RIPRAP (CLASS A)	TON
8041020	RIPRAP (CLASS B)	TON
8041030	RIPRAP (CLASS C)	TON
8042800	GEOTEXTILE FABRIC FOR EROSION CONTROL UNDER RIPRAP (CLASS 2)	SY





PAVEMENT MARKING TYPICAL RAISED MARKER PLACEMENT & DETAIL



NOTES

1. ALL RAISED PAVEMENT MARKERS ARE TO BE SURFACE MOUNTED.
2. RAISED PAVEMENT MARKERS ARE USED TO SUPPLEMENT LINE OR SYMBOL PAVEMENT MARKINGS.
3. RAISED MARKERS ARE USED ONLY ON ROADWAYS SPECIFICALLY INDICATED ON THE PLANS. SOME ROADWAYS WILL HAVE LINE AND SYMBOL PAVEMENT MARKINGS, WITHOUT THE USE OF PAVEMENT MARKERS.
4. RAISED PAVEMENT MARKERS ARE THE SAME COLOR AS THE LINE THEY SUPPLEMENT. CLEAR PAVEMENT MARKERS ARE USED WITH WHITE LINES OR SYMBOLS, AND YELLOW, WITH YELLOW LINES. WHEN RED PAVEMENT MARKERS, OR COMBINATION RED AND CLEAR MARKERS ARE USED, THE RED COLOR IS TO INDICATE A WRONG WAY MOVEMENT.
5. RAISED MARKERS ARE USED TO SUPPLEMENT LANE LINES AND LEFT EDGE-LINES AGAINST NARROW (16' OR LESS AND NORMALLY PAVED) MEDIANS. THEY ARE NOT USED WITH RIGHT EDGE LINES OR LEFT EDGE LINES ADJACENT TO A WIDE (NORMALLY 30' OR MORE AND EARTH) MEDIANS.
6. RAISED MARKERS ARE NOT NORMALLY USED ADJACENT TO A RAISED CURBED MEDIAN WHERE THE MEDIAN IS ONE HALF MILE OR MORE IN LENGTH. RAISED MARKERS MAY, HOWEVER, BE USED ADJACENT TO A RAISED MEDIAN WHERE THE MEDIAN IS INTERMITTANT IN NATURE AND CONTINUITY OF GUIDANCE AT NIGHT IS ENHANCED BY CONTINUING THE RAISED MARKINGS. FOR SHORT RAISED MEDIANS THE RAISED PAVEMENT MARKERS ARE USED EVEN THOUGH THE YELLOW LINE THEY SUPPLEMENT IS TERMINATED WHERE THE MEDIAN BEGINS.
7. MARKERS SUPPLEMENTING SOLID LINES SHALL BE SPACED AT 40'.
8. RAISED PAVEMENT MARKERS ARE NOT USED ADJACENT TO CURB AND GUTTER EXCEPT WHERE SPECIFIED BY PLAN NOTES.
9. REFLECTIVE PORTION OF MARKERS MUST BE PLACED SO AS TO BE VIEWED BY THE INTENDED APPROACHING DRIVERS ON THE ROADWAY BEING MARKED.
10. THERE WILL BE A MINIMUM OF TWO RAISED MARKERS PER TURN LANE. IF ONLY TWO BROKEN LINES ARE USED, THERE WILL BE A RAISED MARKER AFTER EACH LINE. IF ONLY ONE BROKEN LINE IS USED, A RAISED MARKER WILL BE USED BEFORE AND AFTER THE LINE.
11. THERE WILL BE A MINIMUM REFLECTIVE AREA OF 2.5 sq. in.

REFERENCES

SIGNING AND MARKING ENGINEER
SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER NO. 23845 MARK H. ANTHONY
SIGNATURE
2-12-08
DATE

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SCDOT
SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS OFFICE
955 PARK STREET
ROOM 405
COLUMBIA, SC 29201

STANDARD DRAWING

PAVEMENT MARKING TYPICAL RAISED MARKER PLACEMENT & DETAIL

630-105-00
EFFECTIVE LETTING DATE MAY 2008 THIS DRAWING IS NOT TO SCALE

STANDARD NOTES:

1. IF NECESSARY, SLOPES, WHICH EXCEED EIGHT (8) VERTICAL FEET SHOULD BE STABILIZED WITH SYNTHETIC OR VEGETATIVE MATS, IN ADDITION TO HYDROSEEDING. IT MAY BE NECESSARY TO INSTALL TEMPORARY SLOPE DRAINS DURING CONSTRUCTION. TEMPORARY BERMS MAY BE NEEDED UNTIL THE SLOPE IS BROUGHT TO GRADE.
2. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN FOURTEEN (14) DAYS AFTER WORK HAS CEASED, EXCEPT AS STATED BELOW.
   - WHERE STABILIZATION BY THE 14TH DAY IS PRECLUDED BY SNOW COVER OR FROZEN GROUND CONDITIONS STABILIZATION MEASURES MUST BE INITIATED AS SOON AS PRACTICABLE.
   - WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH-DISTURBING ACTIVITIES WILL BE RESUMED WITHIN 14 DAYS, TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE.
3. ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED ONCE EVERY CALENDAR WEEK. IF PERIODIC INSPECTION OR OTHER INFORMATION INDICATES THAT A BMP HAS BEEN INAPPROPRIATELY, OR INCORRECTLY, THE PERMITTEE MUST ADDRESS THE NECESSARY REPLACEMENT OR MODIFICATION REQUIRED TO CORRECT THE BMP WITHIN 48 HOURS OF IDENTIFICATION.
4. PROVIDE SILT FENCE AND/OR OTHER CONTROL DEVICES, AS MAY BE REQUIRED, TO CONTROL SOIL EROSION DURING UTILITY CONSTRUCTION. ALL DISTURBED AREAS SHALL BE CLEANED, GRADED, AND STABILIZED WITH GRASSING IMMEDIATELY AFTER THE UTILITY INSTALLATION. FILL, COVER, AND TEMPORARY SEEDING AT THE END OF EACH DAY ARE RECOMMENDED. IF WATER IS ENCOUNTERED WHILE TRENCHING, THE WATER SHOULD BE FILTERED TO REMOVE SEDIMENT BEFORE BEING PUMPED BACK INTO ANY WATERS OF THE STATE.
5. ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND ALL DISTURBED AREAS HAVE BEEN STABILIZED. ADDITIONAL CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION IN ORDER TO CONTROL EROSION AND/OR OFFSITE SEDIMENTATION. ALL TEMPORARY CONTROL DEVICES SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED.
6. THE CONTRACTOR MUST TAKE NECESSARY ACTION TO MINIMIZE THE TRACKING OF MUD ONTO PAVED ROADWAY(S) FROM CONSTRUCTION AREAS AND THE GENERATION OF DUST. THE CONTRACTOR SHALL DAILY REMOVE MUD/SOIL FROM PAVEMENT, AS MAY BE REQUIRED.
7. RESIDENTIAL SUBDIVISIONS REQUIRE EROSION CONTROL FEATURES FOR INFRASTRUCTURE AS WELL AS FOR INDIVIDUAL LOT CONSTRUCTION. INDIVIDUAL PROPERTY OWNERS SHALL FOLLOW THESE PLANS DURING CONSTRUCTION OR OBTAIN APPROVAL OF AN INDIVIDUAL PLAN IN ACCORDANCE WITH S.C. REG. 72-300 ET SEQ. AND SCR100000.
8. TEMPORARY DIVERSION BERMS AND/OR DITCHES WILL BE PROVIDED AS NEEDED DURING CONSTRUCTION TO PROTECT WORK AREAS FROM UPSLOPE RUNOFF AND/OR TO DIVERT SEDIMENT-LADEN WATER TO APPROPRIATE TRAPS OR STABLE OUTLETS.
9. ALL WATERS OF THE STATE (WOS), INCLUDING WETLANDS, ARE TO BE FLAGGED OR OTHERWISE CLEARLY MARKED IN THE FIELD. A DOUBLE ROW OF SILT FENCE IS TO BE INSTALLED IN ALL AREAS WHERE A 50-FOOT BUFFER CAN'T BE MAINTAINED BETWEEN THE DISTURBED AREA AND ALL WOS. A 10-FOOT BUFFER SHOULD BE MAINTAINED BETWEEN THE LAST ROW OF SILT FENCE AND ALL WOS.
10. LITTER, CONSTRUCTION DEBRIS, OILS, FUELS, AND BUILDING PRODUCTS WITH SIGNIFICANT POTENTIAL FOR IMPACT (SUCH AS STOCKPILES OF FRESHLY TREATED LUMBER) AND CONSTRUCTION CHEMICALS THAT COULD BE EXPOSED TO STORM WATER MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE IN STORM WATER DISCHARGES.
11. A COPY OF THE SWPPP, INSPECTIONS RECORDS, AND RAINFALL DATA MUST BE RETAINED AT THE CONSTRUCTION SITE OR AT A NEARBY LOCATION EASILY ACCESSIBLE DURING NORMAL BUSINESS HOURS, FROM THE DATE OF COMMENCEMENT OF CONSTRUCTION ACTIVITIES TO THE DATE THAT FINAL STABILIZATION IS REACHED.
12. INITIATE STABILIZATION MEASURES ON ANY EXPOSED STEEP SLOPE (3H:1V OR GREATER) WHERE LAND-DISTURBING ACTIVITIES HAVE PERMANENTLY OR TEMPORARILY CEASED, AND WILL NOT RESUME FOR A PERIOD OF 7 CALENDAR DAYS.
13. MINIMIZE SOIL COMPACTION AND, UNLESS INFEASIBLE, PRESERVE TOPSOIL.
14. MINIMIZE THE DISCHARGES OF POLLUTANTS FROM EQUIPMENT AND VEHICLE WASHING, WHEEL WASH WATER, AND OTHER WASH WATERS. WASH WATERS MUST BE TREATED IN A SEDIMENT BASIN OR ALTERNATIVE CONTROL THAT PROVIDES EQUIVALENT OR BETTER TREATMENT PRIOR TO DISCHARGE.
15. MINIMIZE THE DISCHARGE OF POLLUTANTS FROM DEWATERING OF TRENCHES AND EXCAVATED AREAS. THESE DISCHARGES ARE TO BE ROUTED THROUGH APPROPRIATE BMPS (SEDIMENT BASIN, FILTER BAG, ETC.).
16. THE FOLLOWING DISCHARGES FROM SITES ARE PROHIBITED:
   - WASTEWATER FROM WASHOUT OF CONCRETE, UNLESS MANAGED BY AN APPROPRIATE CONTROL;
   - WASTEWATER FROM WASHOUT AND CLEANOUT OF STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS;
   - FUELS, OILS, OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE; AND
   - SOAPS OR SOLVENTS USED IN VEHICLE AND EQUIPMENT WASHING.
17. AFTER CONSTRUCTION ACTIVITIES BEGIN, INSPECTIONS MUST BE CONDUCTED AT A MINIMUM OF AT LEAST ONCE EVERY CALENDAR WEEK AND MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE.
18. IF EXISTING BMPS NEED TO BE MODIFIED OR IF ADDITIONAL BMPS ARE NECESSARY TO COMPLY WITH THE REQUIREMENTS OF THIS PERMIT AND/OR SC'S WATER QUALITY STANDARDS, IMPLEMENTATION MUST BE COMPLETED BEFORE THE NEXT STORM EVENT WHENEVER PRACTICABLE. IF IMPLEMENTATION BEFORE THE NEXT STORM EVENT IS IMPRACTICALBE, THE SITUATION MUST BE DOCUMENTED IN THE SWPPP AND ALTERNATIVE BMPS MUST BE IMPLEMENTED AS SOON AS REASONABLY POSSIBLE.
19. A PRE-CONSTRUCTION CONFERENCE MUST BE HELD FOR EACH CONSTRUCTION SITE WITH AN APPROVED ON-SITE SWPPP PRIOR TO THE IMPLEMENTATION OF CONSTRUCTION ACTIVITIES. FOR NON-LINEAR PROJECTS THAT DISTURB 10 ACRES OR MORE THIS CONFERENCE MUST BE HELD ON-SITE UNLESS THE DEPARTMENT HAS APPROVED OTHERWISE.

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SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER NO. 32702 MATTHEW THOMAS HINES

SOUTH CAROLINA DENNIS CORPORATION NO. 3103 CERTIFICATE OF AUTHORIZATION

ENGINEER	DESIGNER	CHECKED
D. HAMRICK	S. SAUNDERS	M. HINES

NOTES AND DETAILS (3 OF 4)

DENNIS CORPORATION

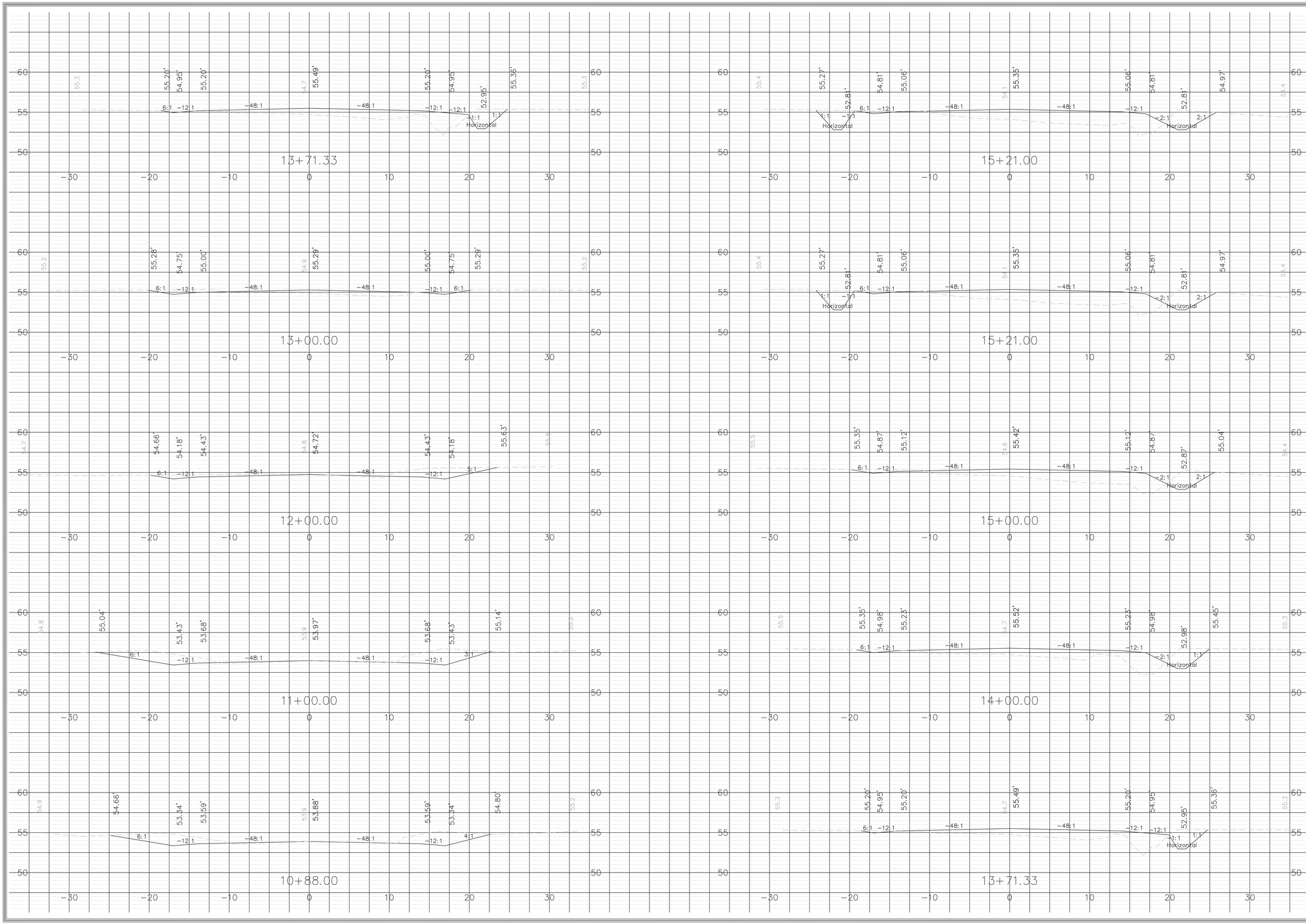
IMPROVEMENTS TO INDIAN HUT ROAD AND AMOS ROAD FOR GEORGETOWN COUNTY

GEORGETOWN COUNTY, SOUTH CAROLINA

PROJECT ID G0004.31

SCALE N.T.S.

SHEET ND-3



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SOUTH CAROLINA DENNIS CORPORATION NO. 3103 CERTIFICATE OF AUTHORIZATION

ENGINEER	DESIGNER	CHECKED
D. HAMRICK	S. SAUNDERS	M. HINES

DENNIS CORPORATION

CROSS SECTIONS

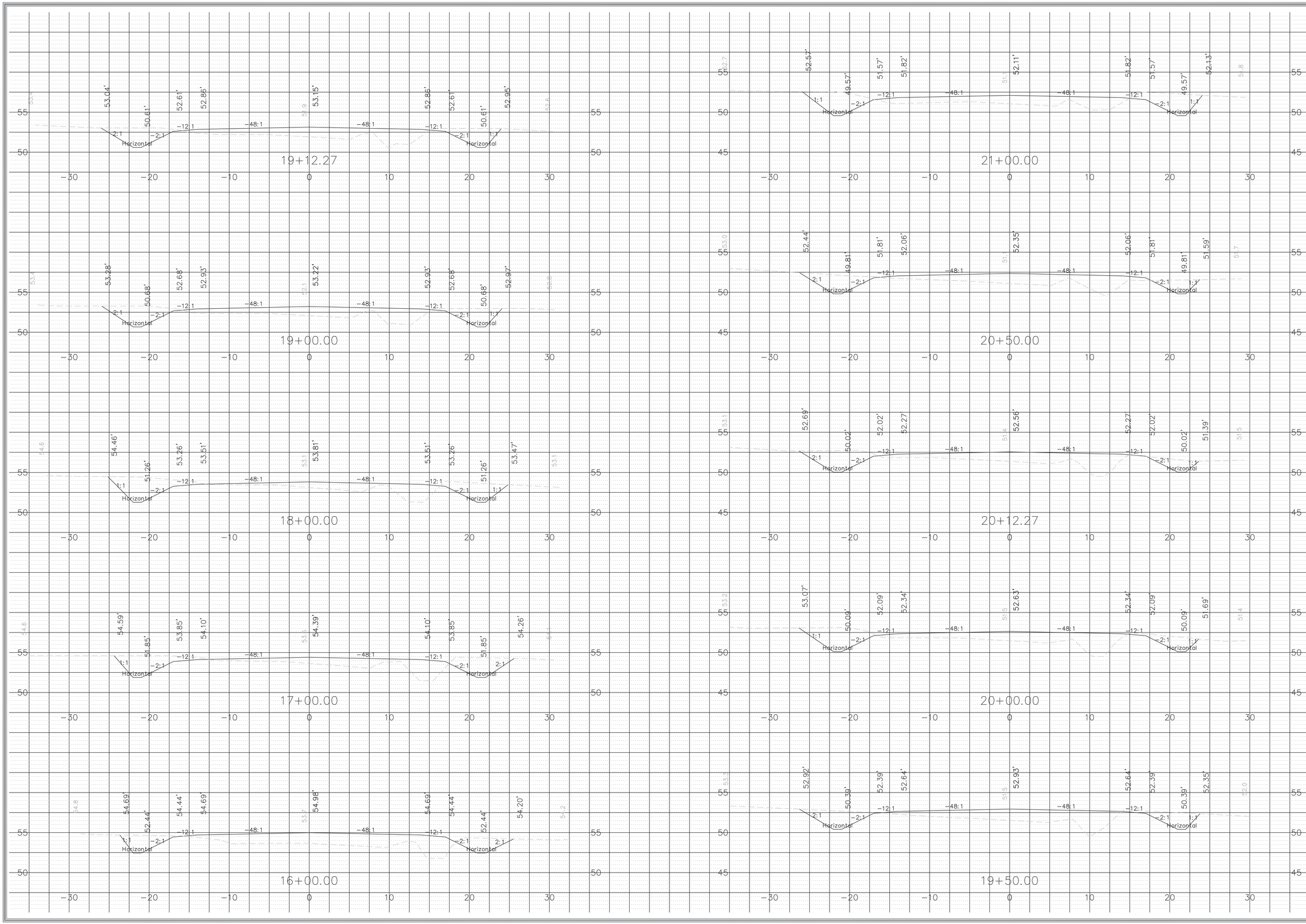
IMPROVEMENTS TO INDIAN HUT ROAD AND AMOS ROAD FOR GEORGETOWN COUNTY

GEORGETOWN COUNTY, SOUTH CAROLINA

PROJECT ID G0004.31

SCALE 1" = 5'

SHEET X1



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SOUTH CAROLINA PROFESSIONAL ENGINEER No. 32702 MATTHEW THOMAS HINES 02/11/20

SOUTH CAROLINA DENNIS CORPORATION NO. 3103 CERTIFICATE OF AUTHORIZATION

ENGINEER	DESIGNER	CHECKED
D. HAMRICK	S. SAUNDERS	M. HINES

DENNIS CORPORATION

CROSS SECTIONS

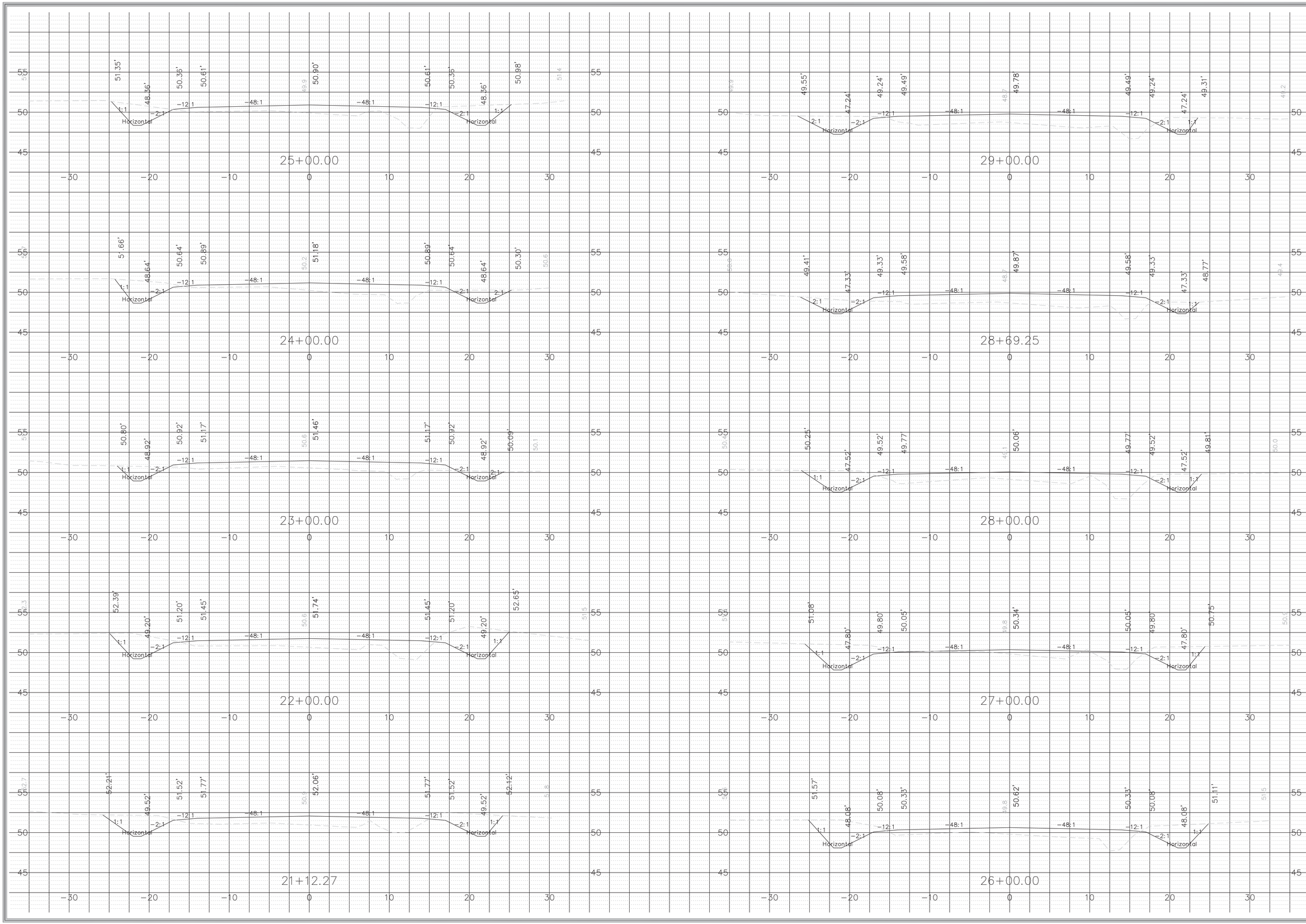
IMPROVEMENTS TO INDIAN HUT ROAD AND AMOS ROAD FOR GEORGETOWN COUNTY

GEORGETOWN COUNTY, SOUTH CAROLINA

PROJECT ID G0004.31

SCALE 1" = 5'

SHEET X2



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SOUTH CAROLINA PROFESSIONAL ENGINEER No. 32702 12/11/20 MATTHEW THOMAS HINES

SOUTH CAROLINA DENNIS CORPORATION NO. 3103 CERTIFICATE OF AUTHORIZATION

ENGINEER	DESIGNER	CHECKED
D. HAMRICK	S. SAUNDERS	M. HINES

DENNIS CORPORATION

CROSS SECTIONS

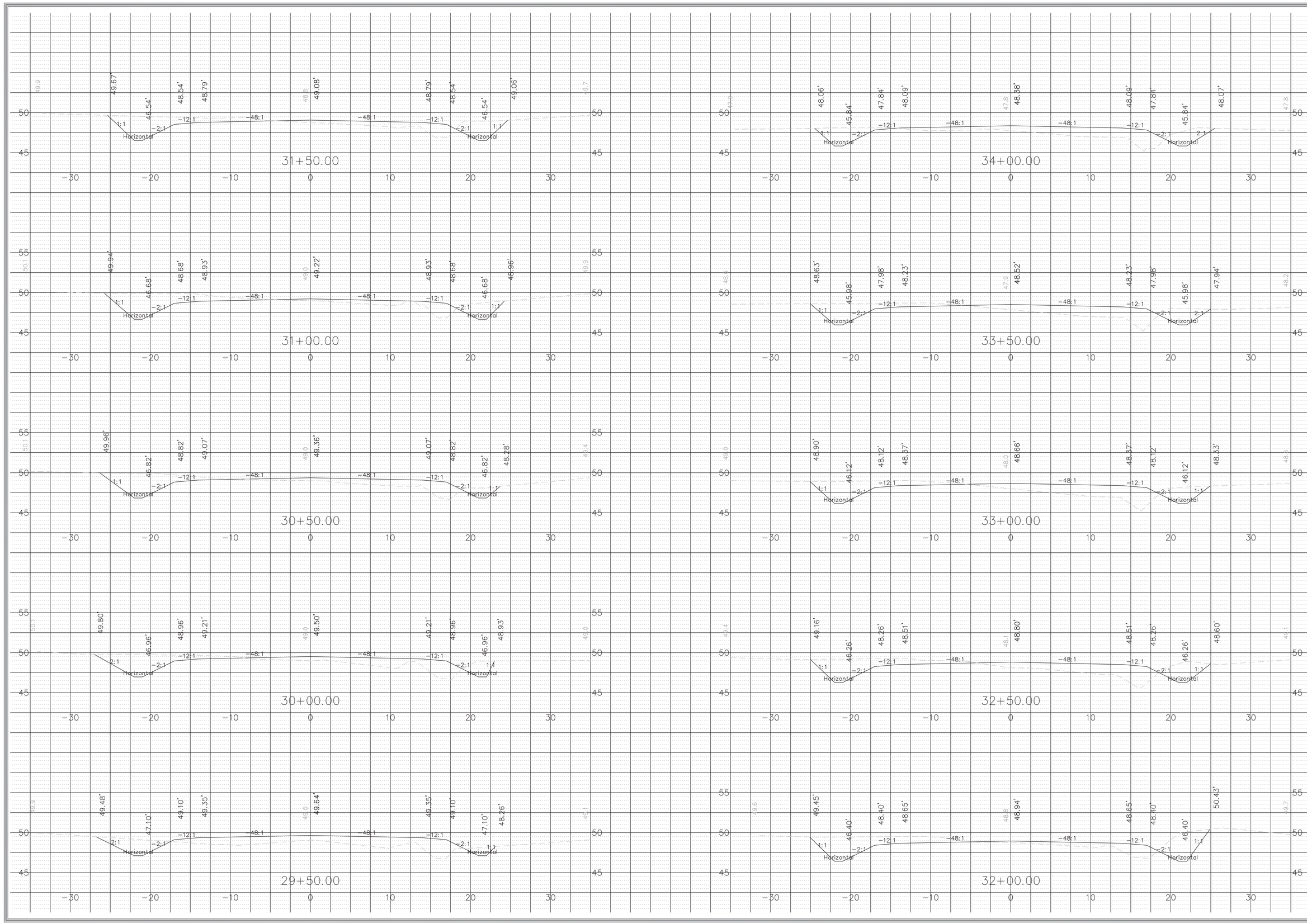
IMPROVEMENTS TO INDIAN HUT ROAD AND AMOS ROAD FOR GEORGETOWN COUNTY

GEORGETOWN COUNTY, SOUTH CAROLINA

PROJECT ID G0004.31

SCALE 1" = 5'

SHEET X3



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SOUTH CAROLINA PROFESSIONAL ENGINEER No. 32702 MATTHEW THOMAS HINES

SOUTH CAROLINA DENNIS CORPORATION NO. 3103 CERTIFICATE OF AUTHORIZATION

ENGINEER	DESIGNER	CHECKED
D. HAMRICK	S. SAUNDERS	M. HINES

CROSS SECTIONS

DENNIS CORPORATION

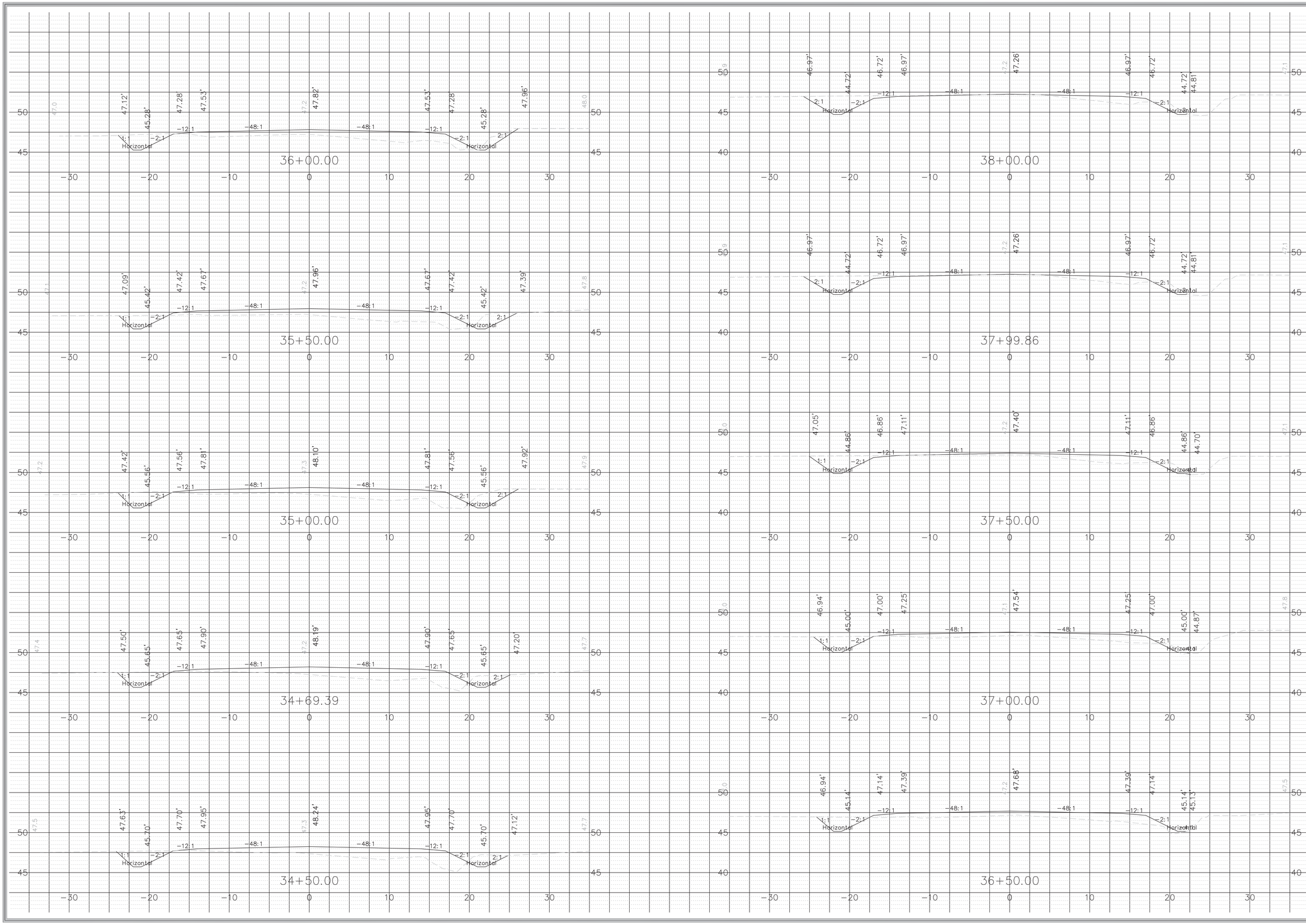
IMPROVEMENTS TO INDIAN HUT ROAD AND AMOS ROAD FOR GEORGETOWN COUNTY

GEORGETOWN COUNTY, SOUTH CAROLINA

PROJECT ID G0004.31

SCALE 1" = 5'

SHEET X4



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SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 32702 MATTHEW THOMAS HINES

SOUTH CAROLINA DENNIS CORPORATION NO. 3103 CERTIFICATE OF AUTHORIZATION

ENGINEER	DESIGNER	CHECKED
D. HAMRICK	S. SAUNDERS	M. HINES

DENNIS CORPORATION

CROSS SECTIONS

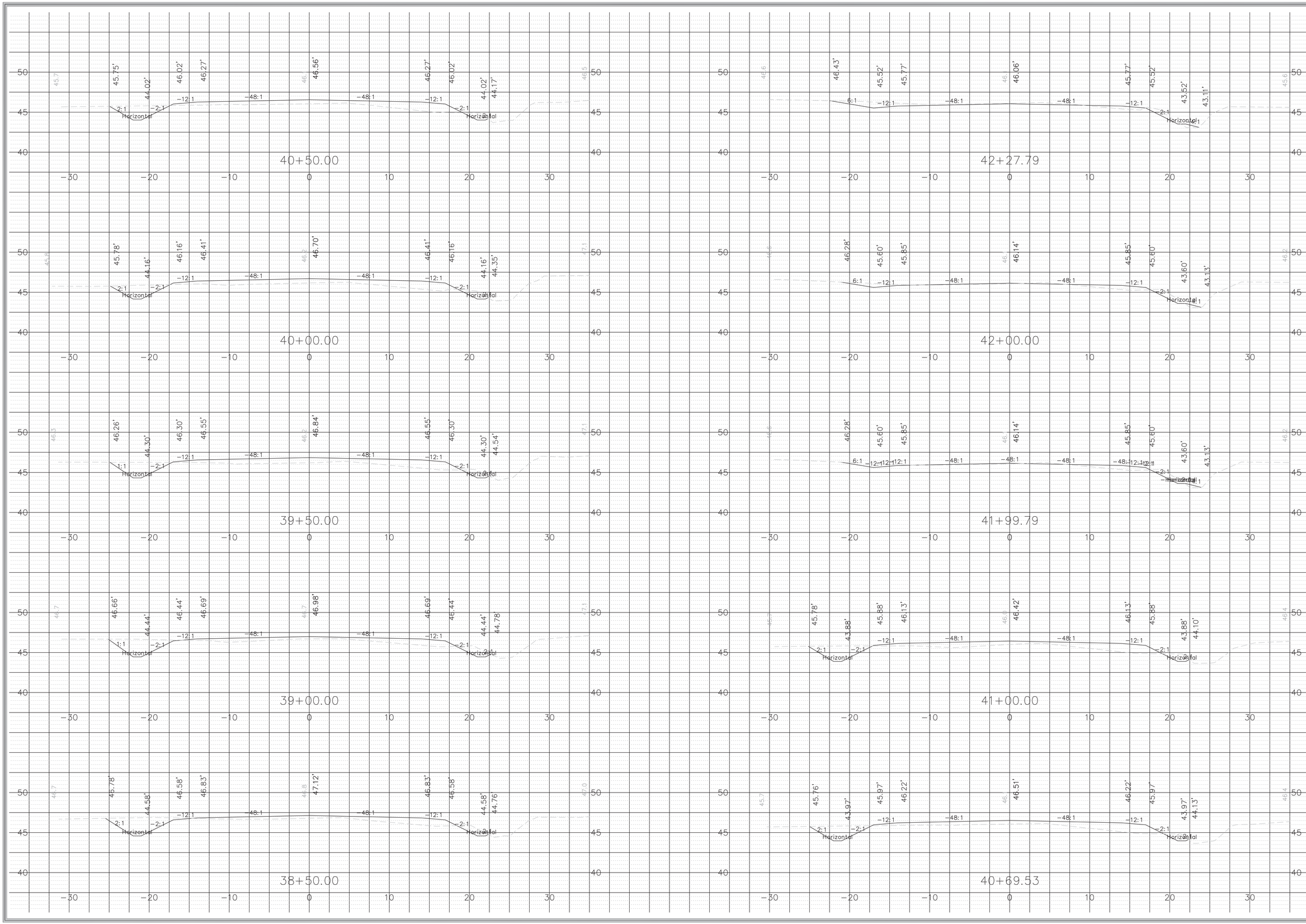
IMPROVEMENTS TO INDIAN HUT ROAD AND AMOS ROAD FOR GEORGETOWN COUNTY

GEORGETOWN COUNTY, SOUTH CAROLINA

PROJECT ID
G0004.31

SCALE
1" = 5'

SHEET
X5



ISSUE DATE:	CONSTR:	BIDS:	PERMITS: 11/05/2020
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SOUTH CAROLINA PROFESSIONAL ENGINEER No. 32702 MATTHEW THOMAS HINES

SOUTH CAROLINA DENNIS CORPORATION NO. 3103 CERTIFICATE OF AUTHORIZATION

ENGINEER	DESIGNER	CHECKED
D. HAMRICK	S. SAUNDERS	M. HINES

DENNIS CORPORATION

CROSS SECTIONS

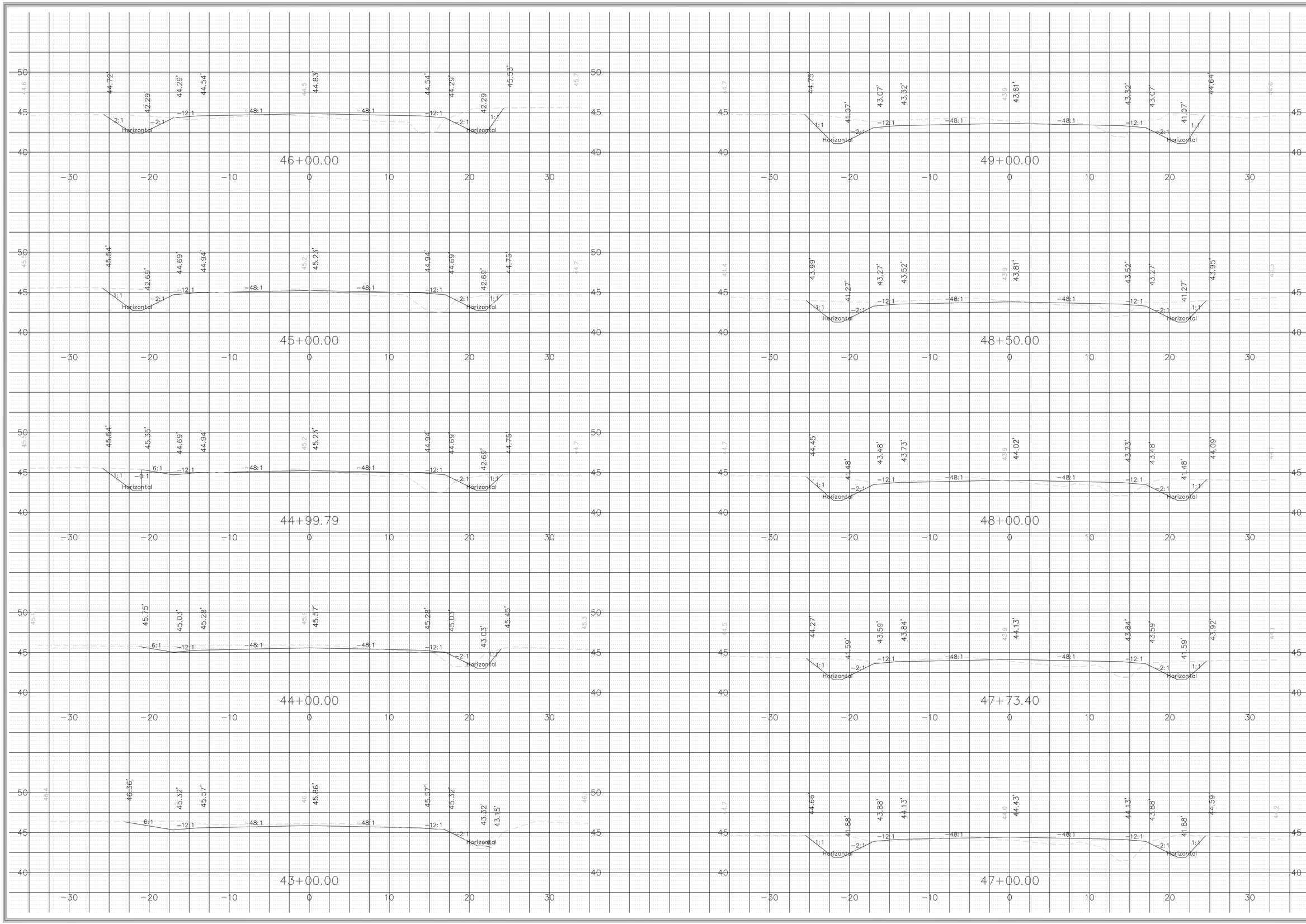
IMPROVEMENTS TO INDIAN HUT ROAD AND AMOS ROAD FOR GEORGETOWN COUNTY

GEORGETOWN COUNTY, SOUTH CAROLINA

PROJECT ID G0004.31

SCALE 1" = 5'

SHEET X6



ISSUE DATE:	CONSTR:	BIDS:	PERMITS: 11/05/2020
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SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 32702 MATTHEW THOMAS HINES 12-4-20

SOUTH CAROLINA DENNIS CORPORATION NO. 3103 CERTIFICATE OF AUTHORIZATION

ENGINEER	DESIGNER	CHECKED
D. HAMRICK	S. SAUNDERS	M. HINES

DENNIS CORPORATION

CROSS SECTIONS

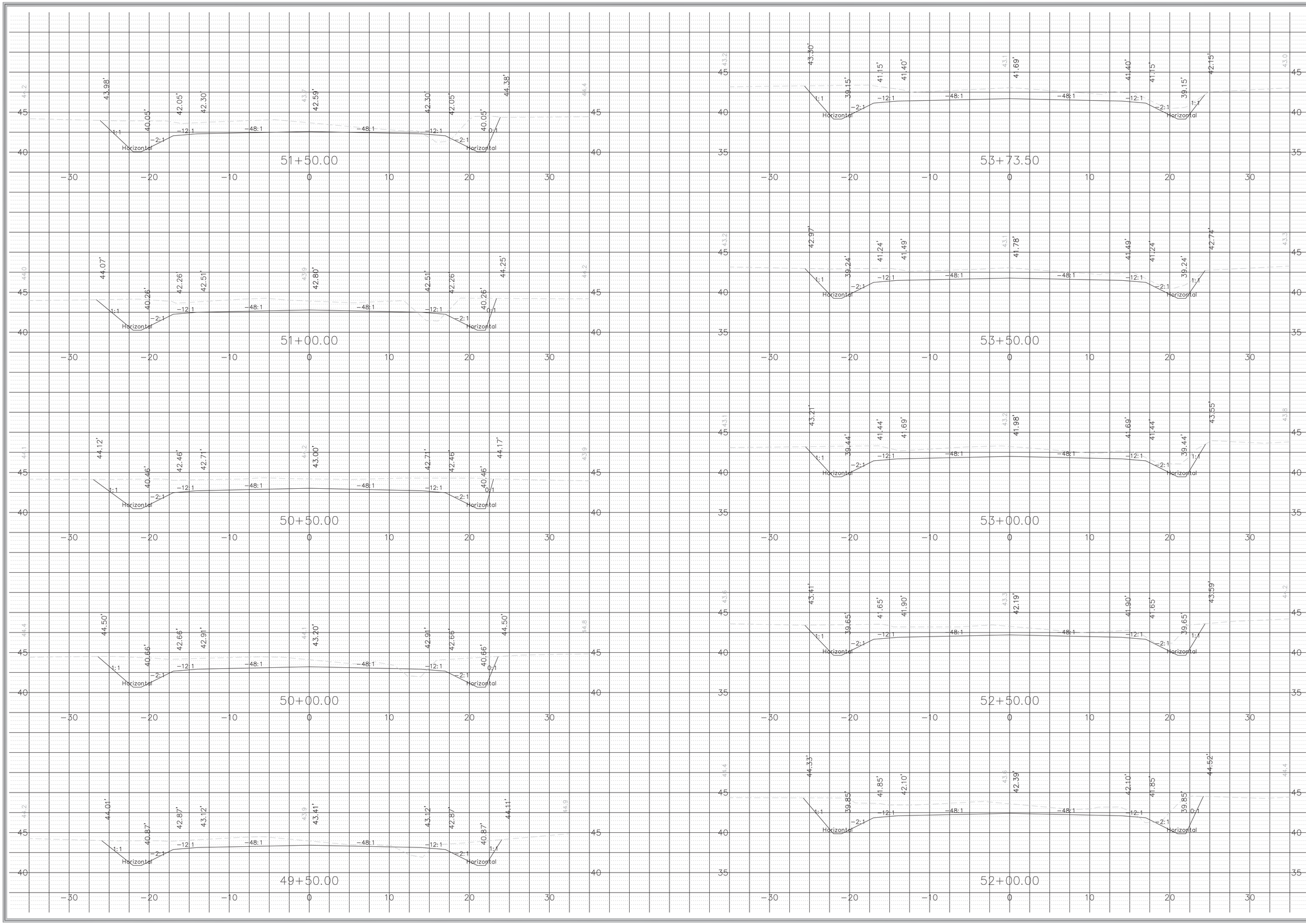
IMPROVEMENTS TO INDIAN HUT ROAD AND AMOS ROAD FOR GEORGETOWN COUNTY

GEORGETOWN COUNTY, SOUTH CAROLINA

PROJECT ID
G0004.31

SCALE
1" = 5'

SHEET
X7



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SOUTH CAROLINA PROFESSIONAL ENGINEER No. 32702 12/11/20 MATTHEW THOMAS HINES

SOUTH CAROLINA DENNIS CORPORATION NO. 3103 CERTIFICATE OF AUTHORIZATION

ENGINEER	D. HAMRICK
DESIGNER	S. SAUNDERS
CHECKED	M. HINES

CROSS SECTIONS

DENNIS CORPORATION

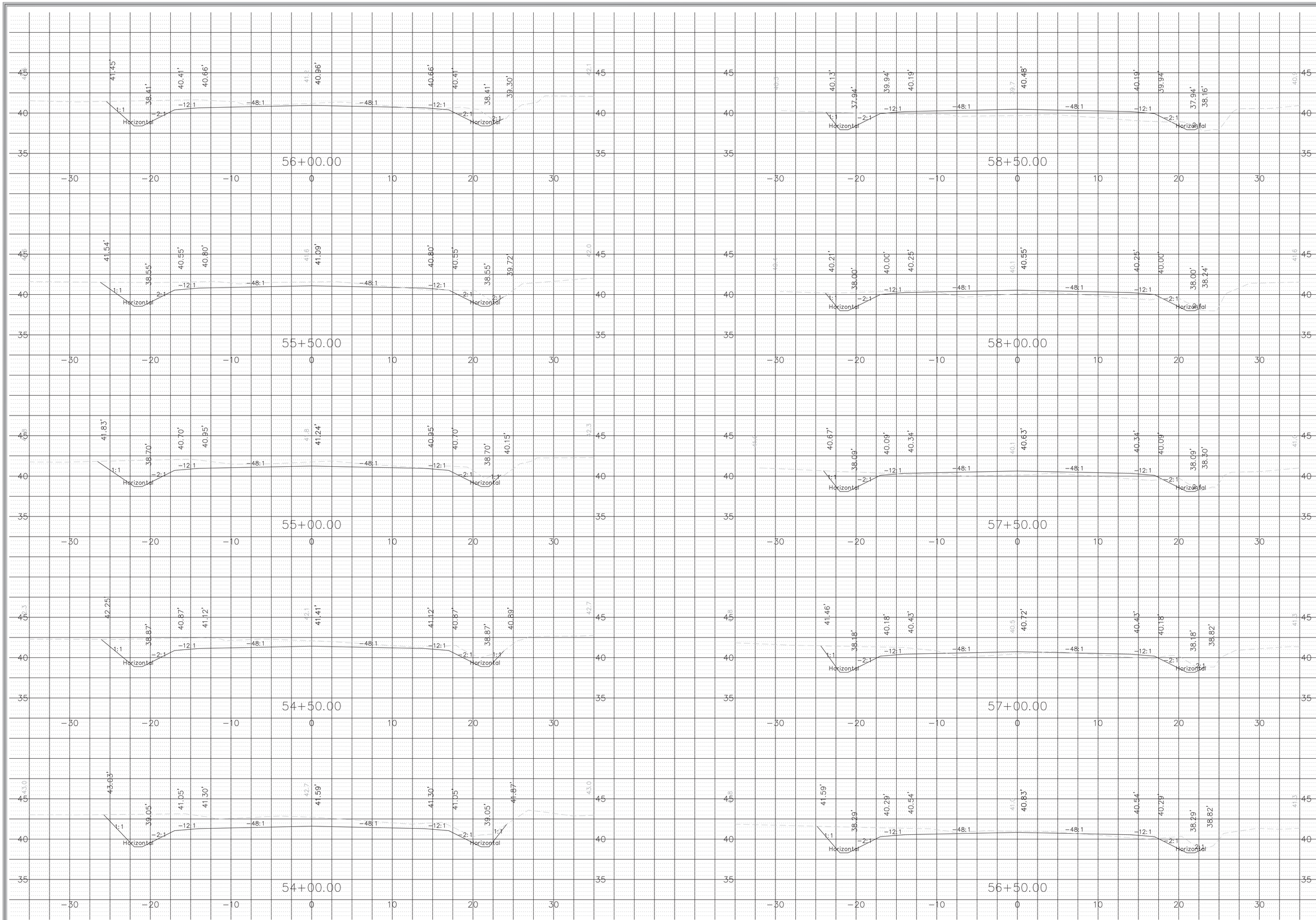
IMPROVEMENTS TO INDIAN HUT ROAD AND AMOS ROAD FOR GEORGETOWN COUNTY

GEORGETOWN COUNTY, SOUTH CAROLINA

PROJECT ID G0004.31

SCALE 1" = 5'

SHEET X8



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SOUTH CAROLINA PROFESSIONAL ENGINEER No. 32702 12/14/20 MATTHEW THOMAS HINES

SOUTH CAROLINA DENNIS CORPORATION NO. 3103 CERTIFICATE OF AUTHORIZATION

ENGINEER	DESIGNER	CHECKED
D. HAMRICK	S. SAUNDERS	M. HINES

DENNIS CORPORATION

CROSS SECTIONS

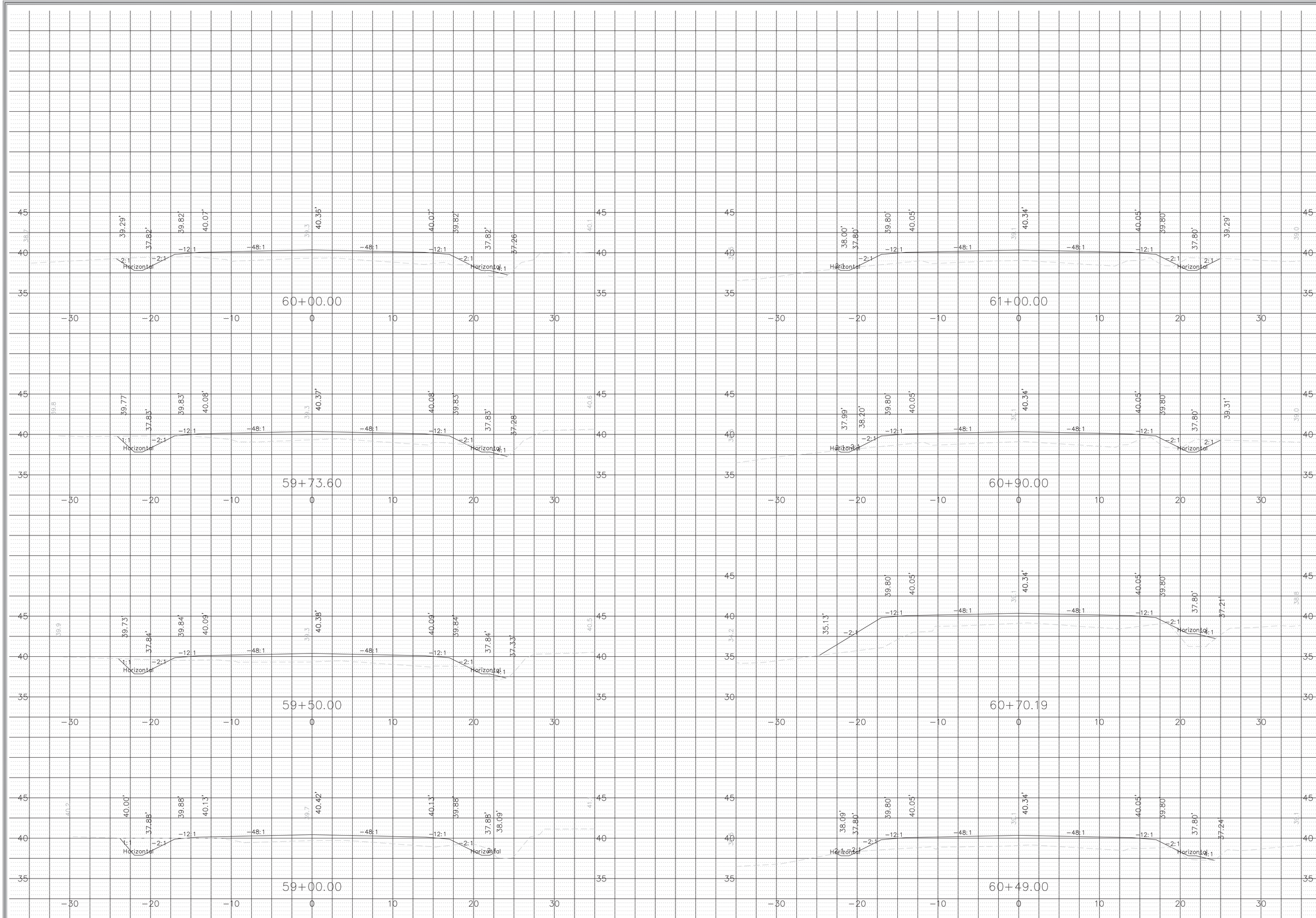
IMPROVEMENTS TO INDIAN HUT ROAD AND AMOS ROAD FOR GEORGETOWN COUNTY

GEORGETOWN COUNTY, SOUTH CAROLINA

PROJECT ID G0004.31

SCALE 1" = 5'

SHEET X9



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SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 32702 12/17/20 MATTHEW THOMAS HINES

SOUTH CAROLINA DENNIS CORPORATION NO. 3103 CERTIFICATE OF AUTHORIZATION

ENGINEER	DESIGNER	CHECKED
D. HAMRICK	S. SAUNDERS	M. HINES

CROSS SECTIONS

DENNIS CORPORATION

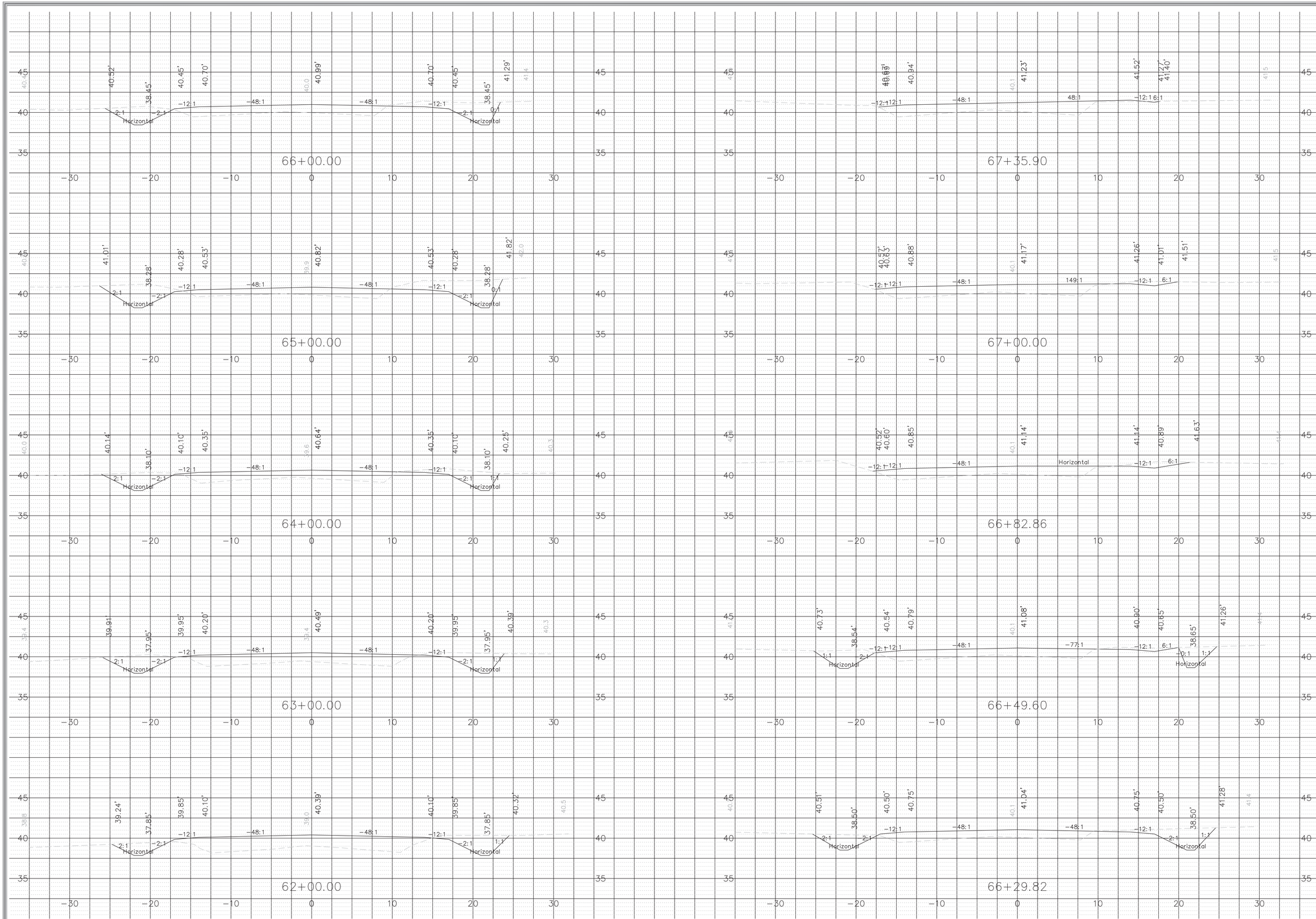
IMPROVEMENTS TO INDIAN HUT ROAD AND AMOS ROAD FOR GEORGETOWN COUNTY

GEORGETOWN COUNTY, SOUTH CAROLINA

PROJECT ID G0004.31

SCALE 1" = 5'

SHEET X10



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SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 32702 MATTHEW THOMAS HINES

SOUTH CAROLINA DENNIS CORPORATION NO. 3103 CERTIFICATE OF AUTHORIZATION

ENGINEER	DESIGNER	CHECKED
D. HAMRICK	S. SAUNDERS	M. HINES

DENNIS CORPORATION

CROSS SECTIONS

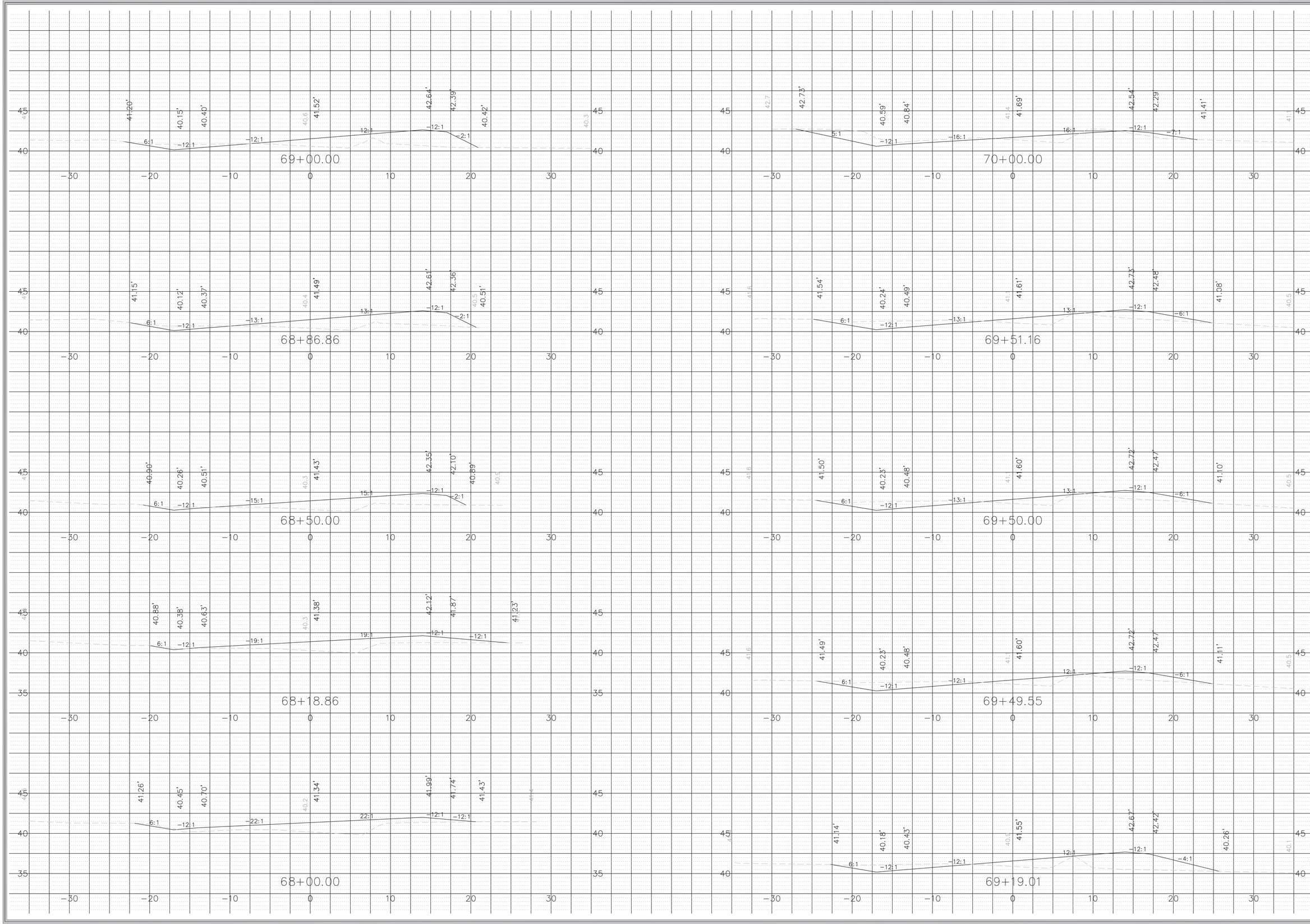
IMPROVEMENTS TO INDIAN HUT ROAD AND AMOS ROAD FOR GEORGETOWN COUNTY

GEORGETOWN COUNTY, SOUTH CAROLINA

PROJECT ID G0004.31

SCALE 1" = 5'

SHEET X11



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SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 32702 MATTHEW THOMAS HINES

SOUTH CAROLINA DENNIS CORPORATION NO. 3103 CERTIFICATE OF AUTHORIZATION

ENGINEER	D. HAMRICK
DESIGNER	S. SAUNDERS
CHECKED	M. HINES

CROSS SECTIONS

DENNIS CORPORATION

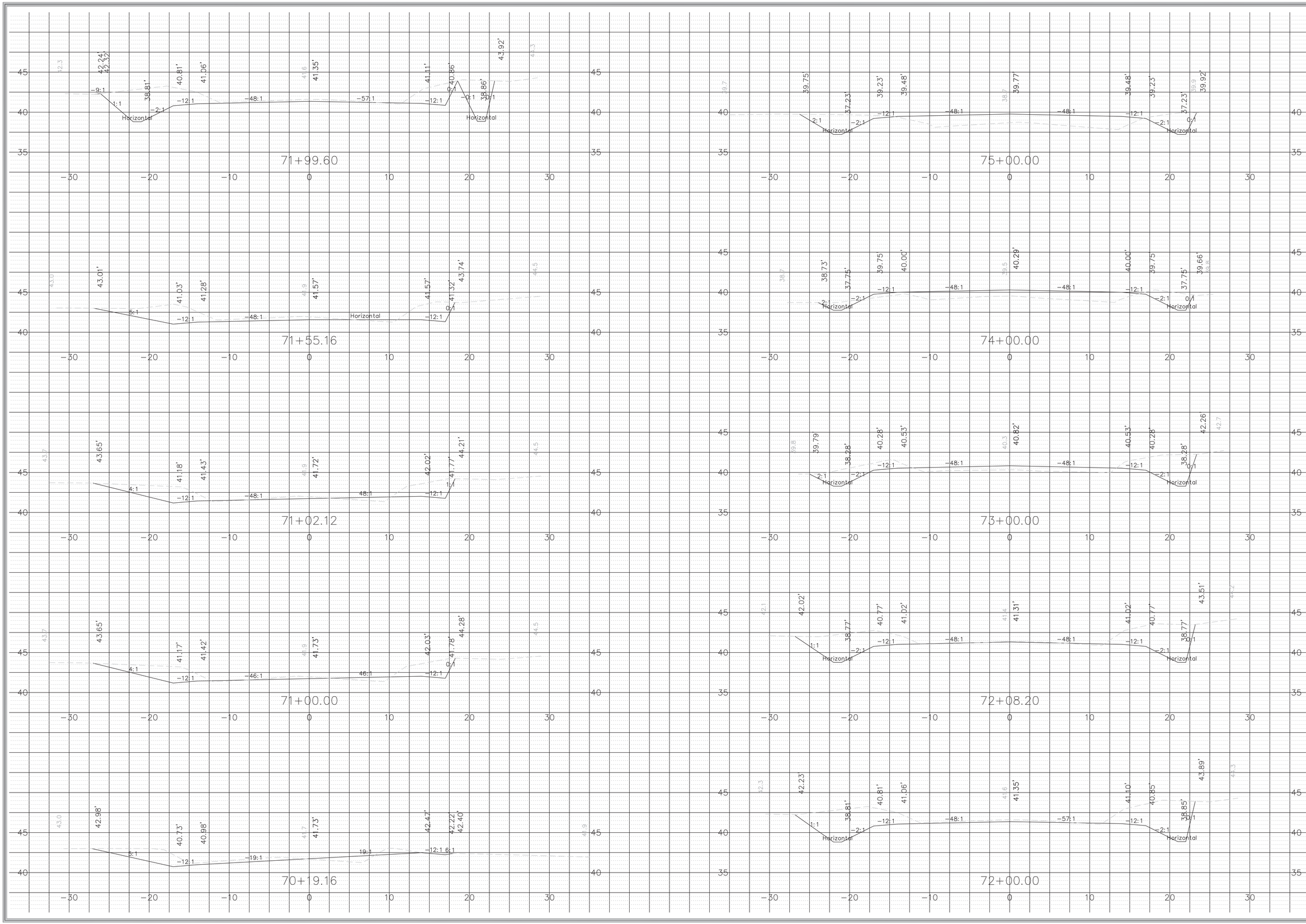
IMPROVEMENTS TO INDIAN HUT ROAD AND AMOS ROAD FOR GEORGETOWN COUNTY

GEORGETOWN COUNTY, SOUTH CAROLINA

PROJECT ID
G0004.31

SCALE
1" = 5'

SHEET
X12



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SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 32702
11/14/20
MATTHEW THOMAS HINES

SOUTH CAROLINA
DENNIS CORPORATION
NO. 3103
CERTIFICATE OF AUTHORIZATION

ENGINEER	DESIGNER	CHECKED
D. HAMRICK	S. SAUNDERS	M. HINES

DENNIS CORPORATION

CROSS SECTIONS

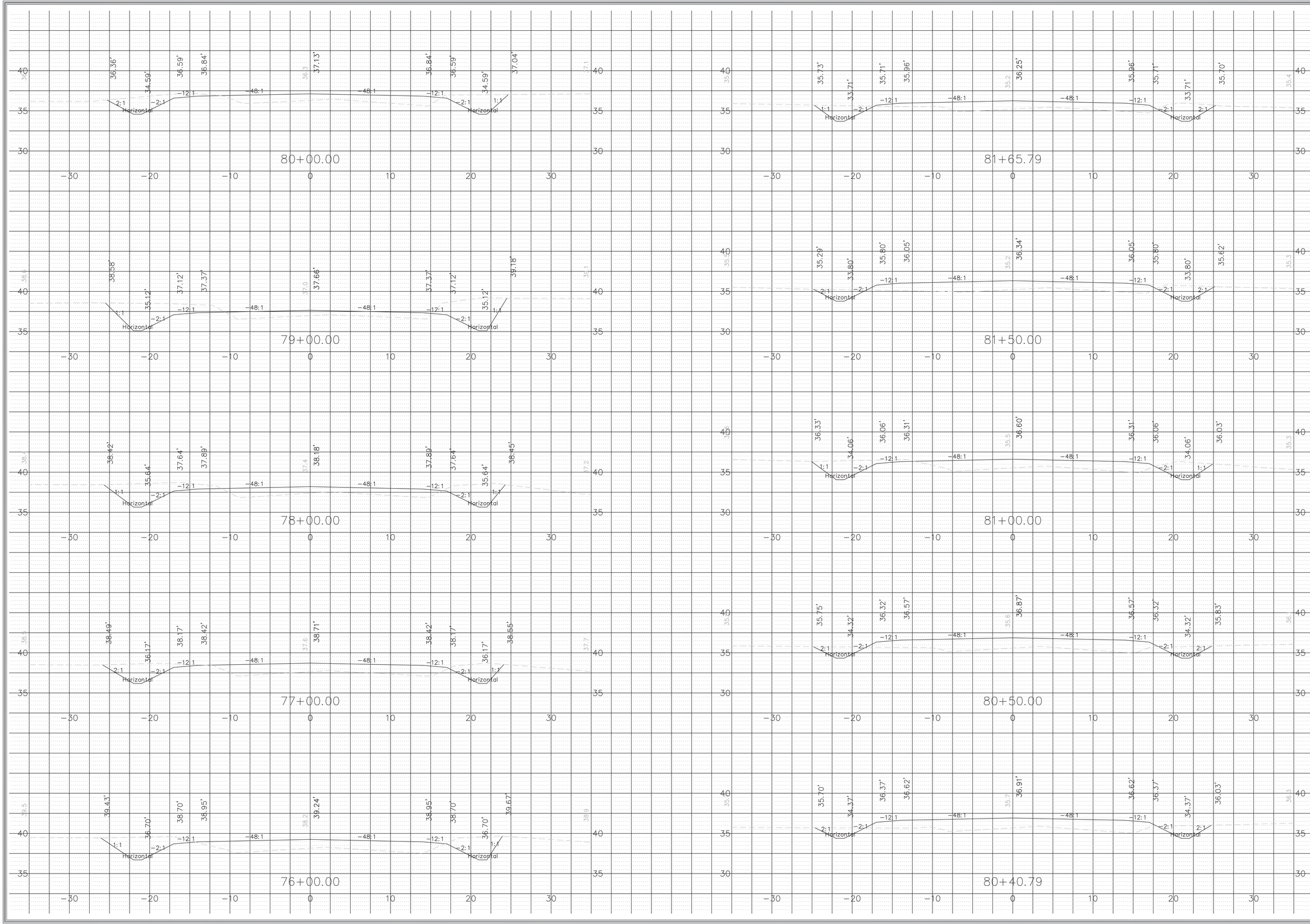
IMPROVEMENTS TO
INDIAN HUT ROAD AND
AMOS ROAD
FOR GEORGETOWN COUNTY

GEORGETOWN COUNTY, SOUTH CAROLINA

PROJECT ID
G0004.31

SCALE
1" = 5'

SHEET
X13



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SOUTH CAROLINA PROFESSIONAL ENGINEER No. 32702 MATTHEW THOMAS HINES

SOUTH CAROLINA DENNIS CORPORATION NO. 3103 CERTIFICATE OF AUTHORIZATION

ENGINEER	DESIGNER	CHECKED
D. HAMRICK	S. SAUNDERS	M. HINES

CROSS SECTIONS

DENNIS CORPORATION

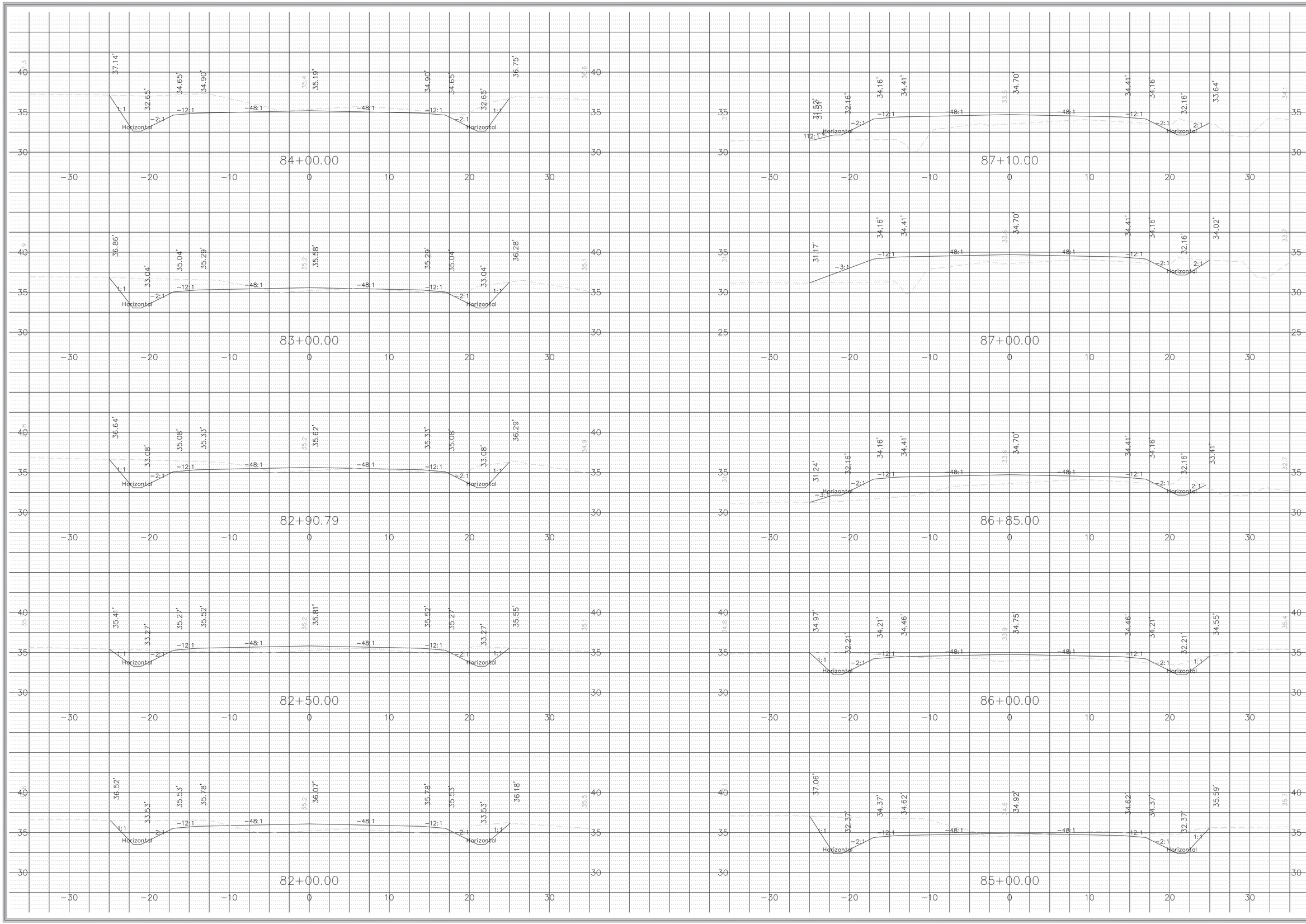
IMPROVEMENTS TO INDIAN HUT ROAD AND AMOS ROAD FOR GEORGETOWN COUNTY

GEORGETOWN COUNTY, SOUTH CAROLINA

PROJECT ID
G0004.31

SCALE
1" = 5'

SHEET
X14



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SOUTH CAROLINA PROFESSIONAL ENGINEER No. 32702 MATTHEW THOMAS HINES

SOUTH CAROLINA DENNIS CORPORATION NO. 3103 CERTIFICATE OF AUTHORIZATION

ENGINEER	DESIGNER	CHECKED
D. HAMRICK	S. SAUNDERS	M. HINES

DENNIS CORPORATION

CROSS SECTIONS

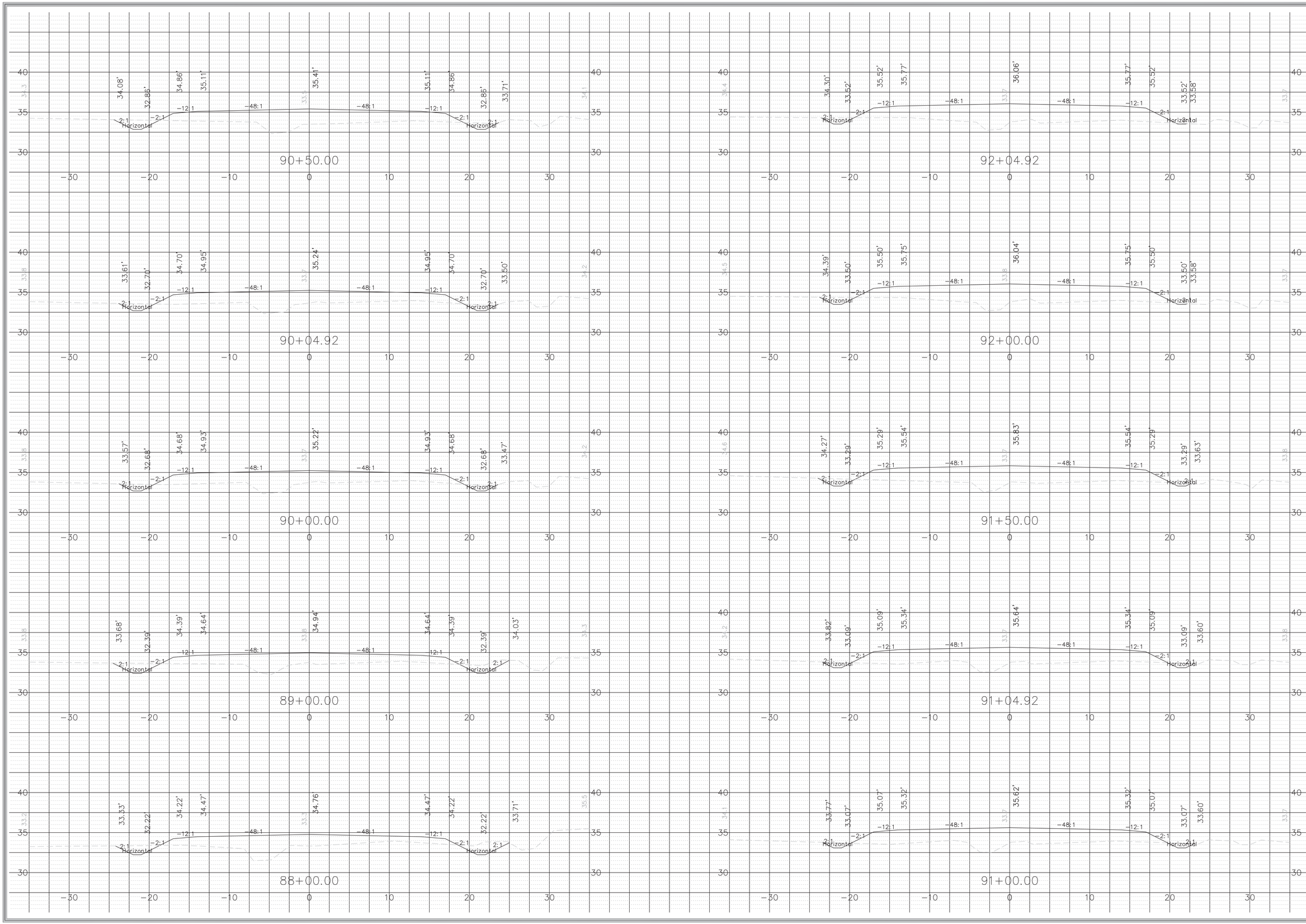
IMPROVEMENTS TO INDIAN HUT ROAD AND AMOS ROAD FOR GEORGETOWN COUNTY

GEORGETOWN COUNTY, SOUTH CAROLINA

PROJECT ID G0004.31

SCALE 1" = 5'

SHEET X15



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SOUTH CAROLINA PROFESSIONAL ENGINEER No. 32702 MATTHEW THOMAS HINES

SOUTH CAROLINA DENNIS CORPORATION NO. 3103 CERTIFICATE OF AUTHORIZATION

ENGINEER	DESIGNER	CHECKED
D. HAMRICK	S. SAUNDERS	M. HINES

DENNIS CORPORATION

CROSS SECTIONS

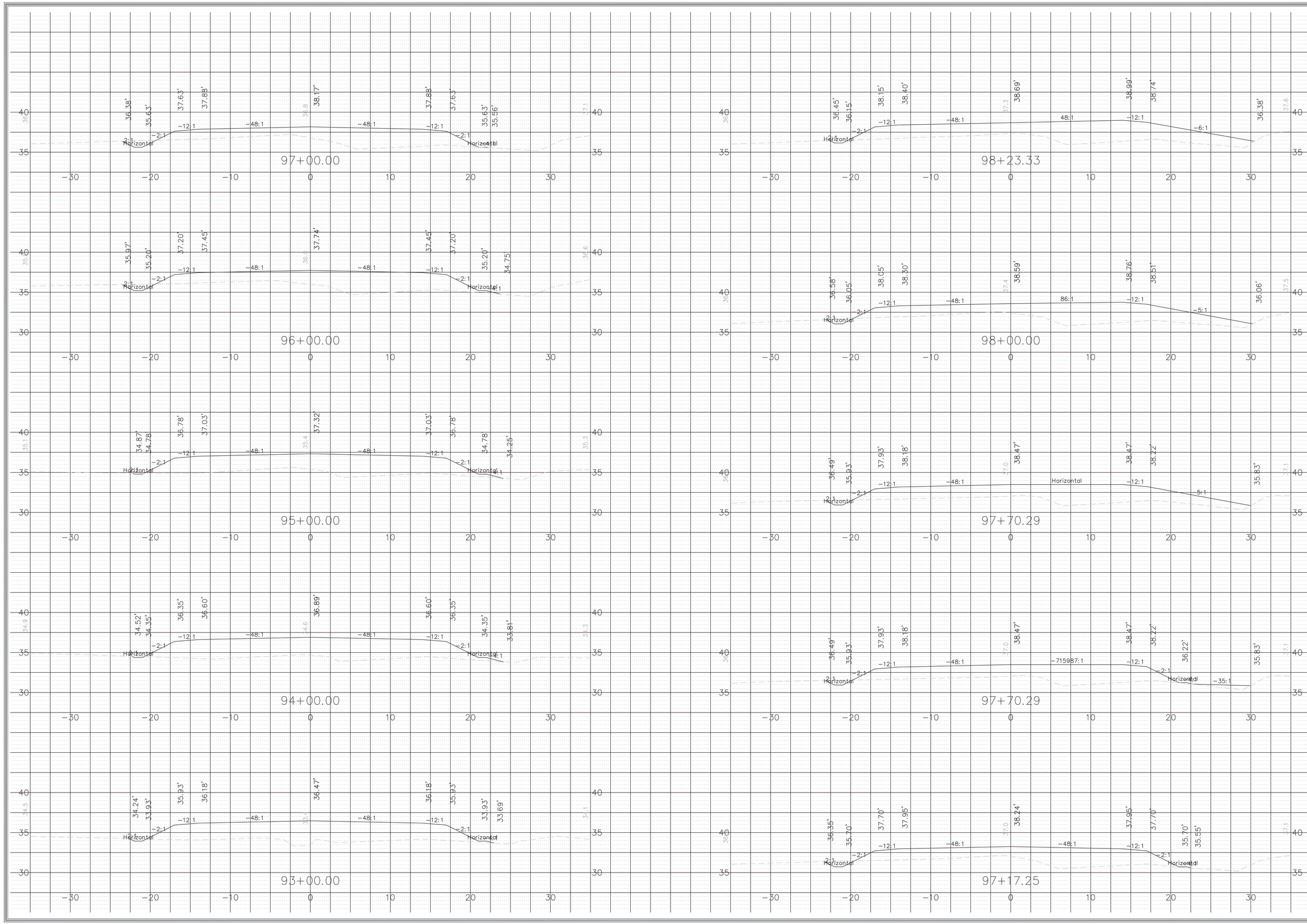
IMPROVEMENTS TO INDIAN HUT ROAD AND AMOS ROAD FOR GEORGETOWN COUNTY

GEORGETOWN COUNTY, SOUTH CAROLINA

PROJECT ID G0004.31

SCALE 1" = 5'

SHEET X16



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SOUTH CAROLINA PROFESSIONAL ENGINEER No. 32702 12/11/20 MATTHEW THOMAS HINES

SOUTH CAROLINA DENNIS CORPORATION NO. 3103 CERTIFICATE OF AUTHORIZATION

ENGINEER	DESIGNER	CHECKED
D. HAMRICK	S. SAUNDERS	M. HINES

CROSS SECTIONS

DENNIS CORPORATION

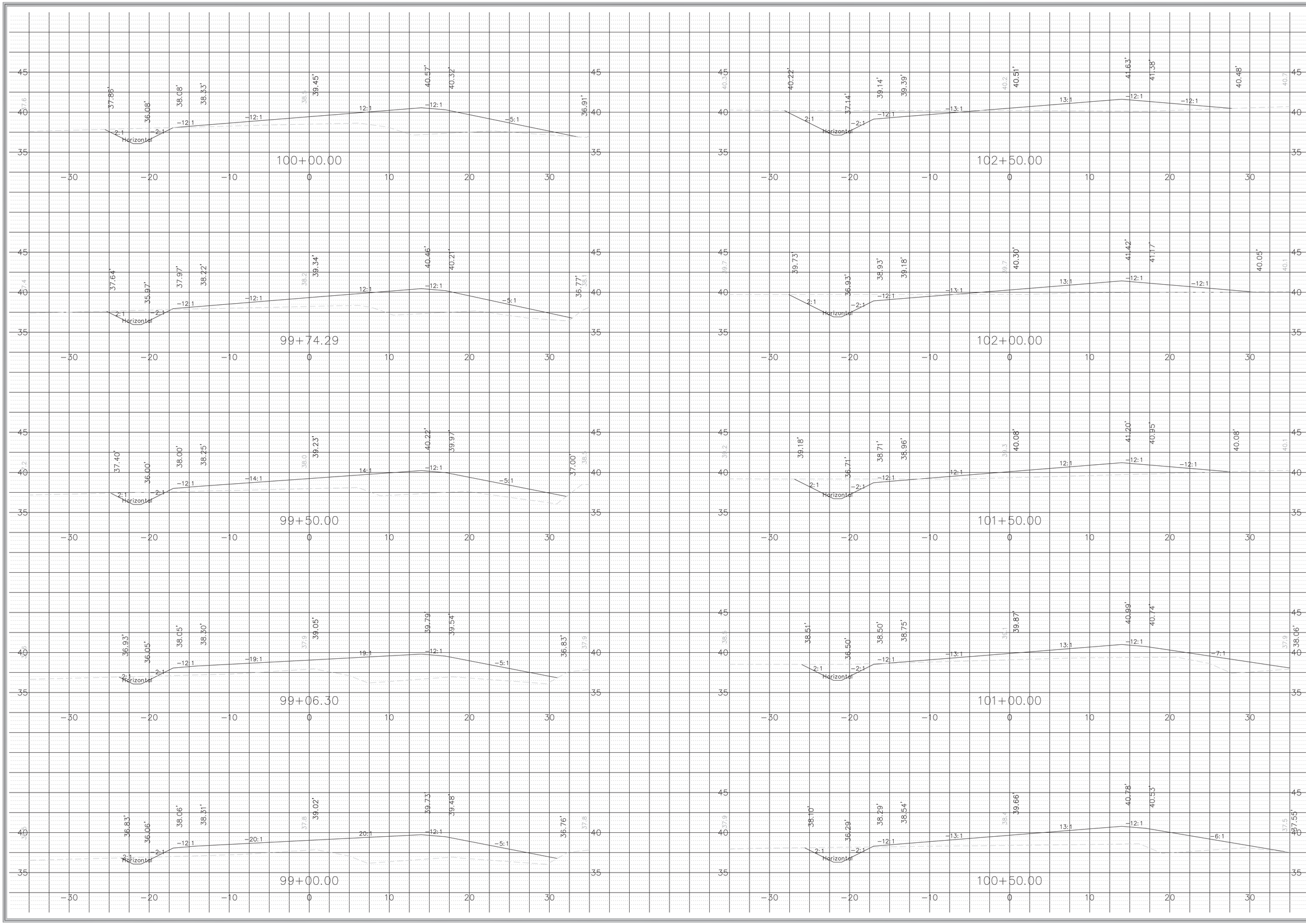
IMPROVEMENTS TO INDIAN HUT ROAD AND AMOS ROAD FOR GEORGETOWN COUNTY

GEORGETOWN COUNTY, SOUTH CAROLINA

PROJECT ID G0004.31

SCALE 1" = 5'

SHEET X17



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SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 32702 MATTHEW THOMAS HINES

SOUTH CAROLINA DENNIS CORPORATION NO. 3103 CERTIFICATE OF AUTHORIZATION

ENGINEER	DESIGNER	CHECKED
D. HAMRICK	S. SAUNDERS	M. HINES

CROSS SECTIONS

DENNIS CORPORATION

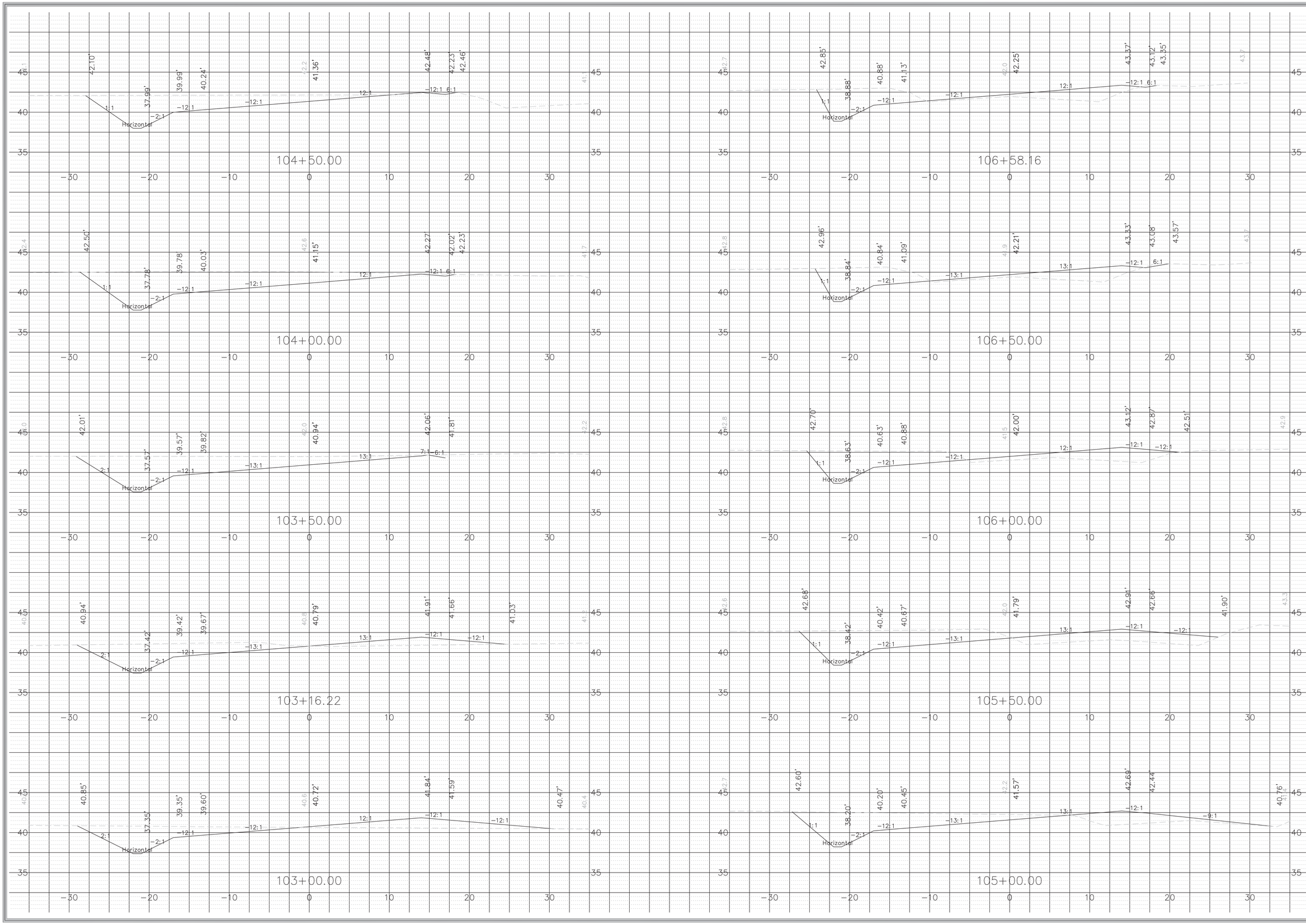
IMPROVEMENTS TO
INDIAN HUT ROAD AND
AMOS ROAD
FOR GEORGETOWN COUNTY

GEORGETOWN COUNTY, SOUTH CAROLINA

PROJECT ID
G0004.31

SCALE
1" = 5'

SHEET
X18



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SOUTH CAROLINA PROFESSIONAL ENGINEER No. 32702 MATTHEW THOMAS HINES 11/11/2020

SOUTH CAROLINA DENNIS CORPORATION NO. 3103 CERTIFICATE OF AUTHORIZATION

ENGINEER	D. HAMRICK
DESIGNER	S. SAUNDERS
CHECKED	M. HINES

CROSS SECTIONS

DENNIS CORPORATION

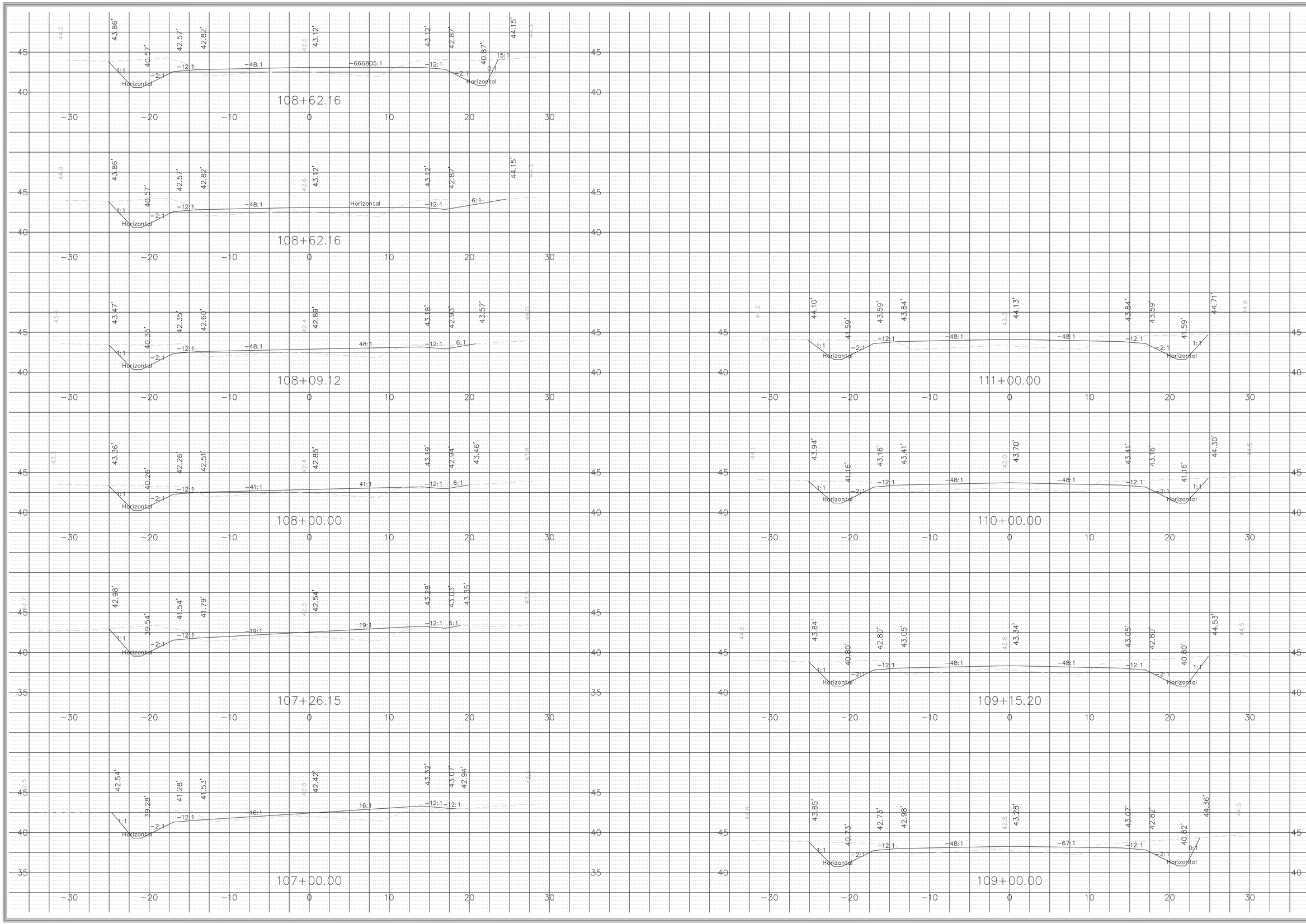
IMPROVEMENTS TO INDIAN HUT ROAD AND AMOS ROAD FOR GEORGETOWN COUNTY

GEORGETOWN COUNTY, SOUTH CAROLINA

PROJECT ID G0004.31

SCALE 1" = 5'

SHEET X19



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SOUTH CAROLINA PROFESSIONAL ENGINEER No. 32702 MATTHEW THOMAS HINES

SOUTH CAROLINA DENNIS CORPORATION NO. 3103 CERTIFICATE OF AUTHORIZATION

ENGINEER	DESIGNER	CHECKED
D. HAMRICK	S. SAUNDERS	M. HINES

DENNIS CORPORATION

CROSS SECTIONS

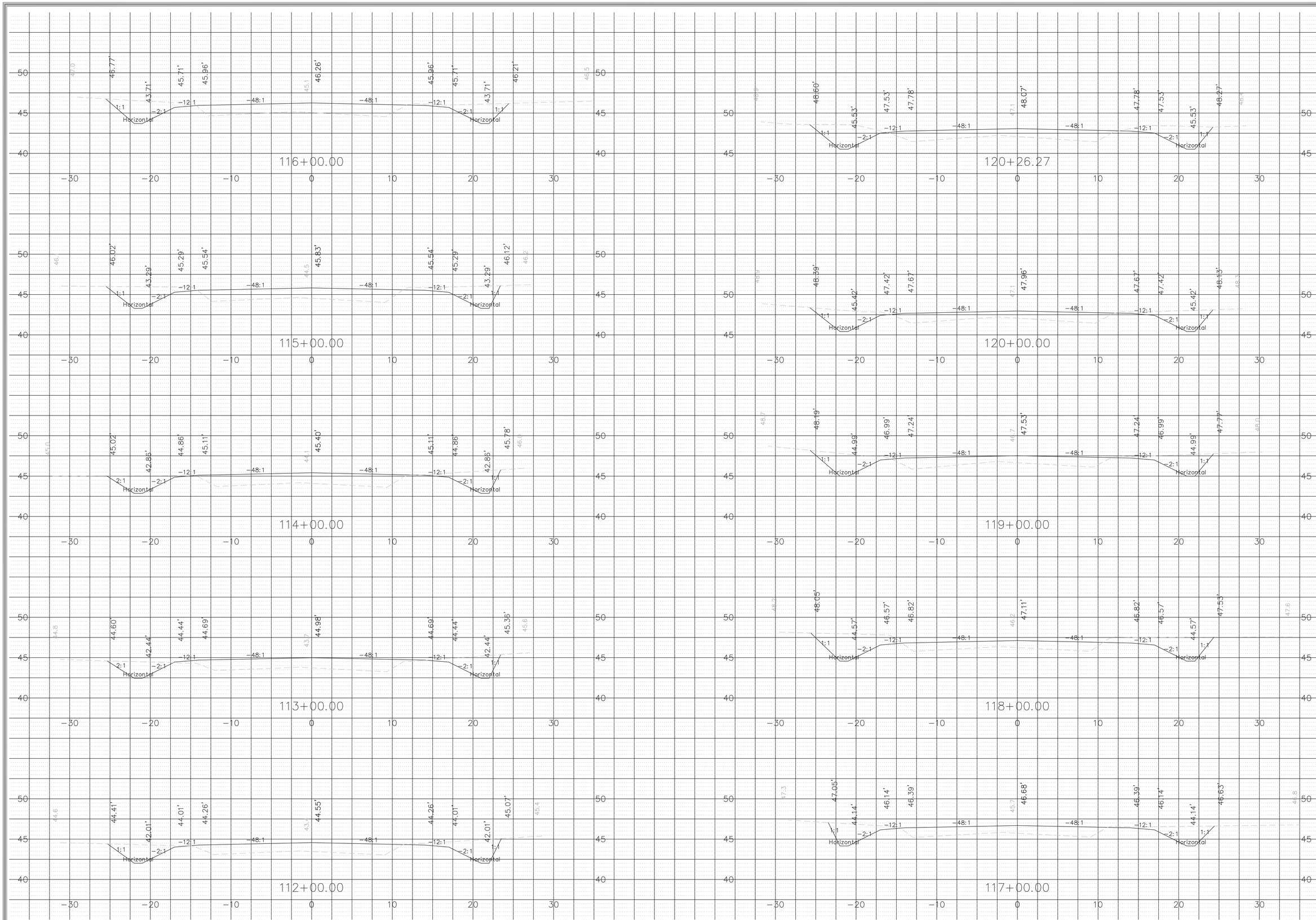
IMPROVEMENTS TO INDIAN HUT ROAD AND AMOS ROAD FOR GEORGETOWN COUNTY

GEORGETOWN COUNTY, SOUTH CAROLINA

PROJECT ID
G0004.31

SCALE
1" = 5'

SHEET
X20



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SOUTH CAROLINA PROFESSIONAL ENGINEER No. 32702 MATTHEW THOMAS HINES 11/19/20

SOUTH CAROLINA DENNIS CORPORATION NO. 3103 CERTIFICATE OF AUTHORIZATION

ENGINEER	DESIGNER	CHECKED
D. HAMRICK	S. SAUNDERS	M. HINES

DENNIS CORPORATION

CROSS SECTIONS

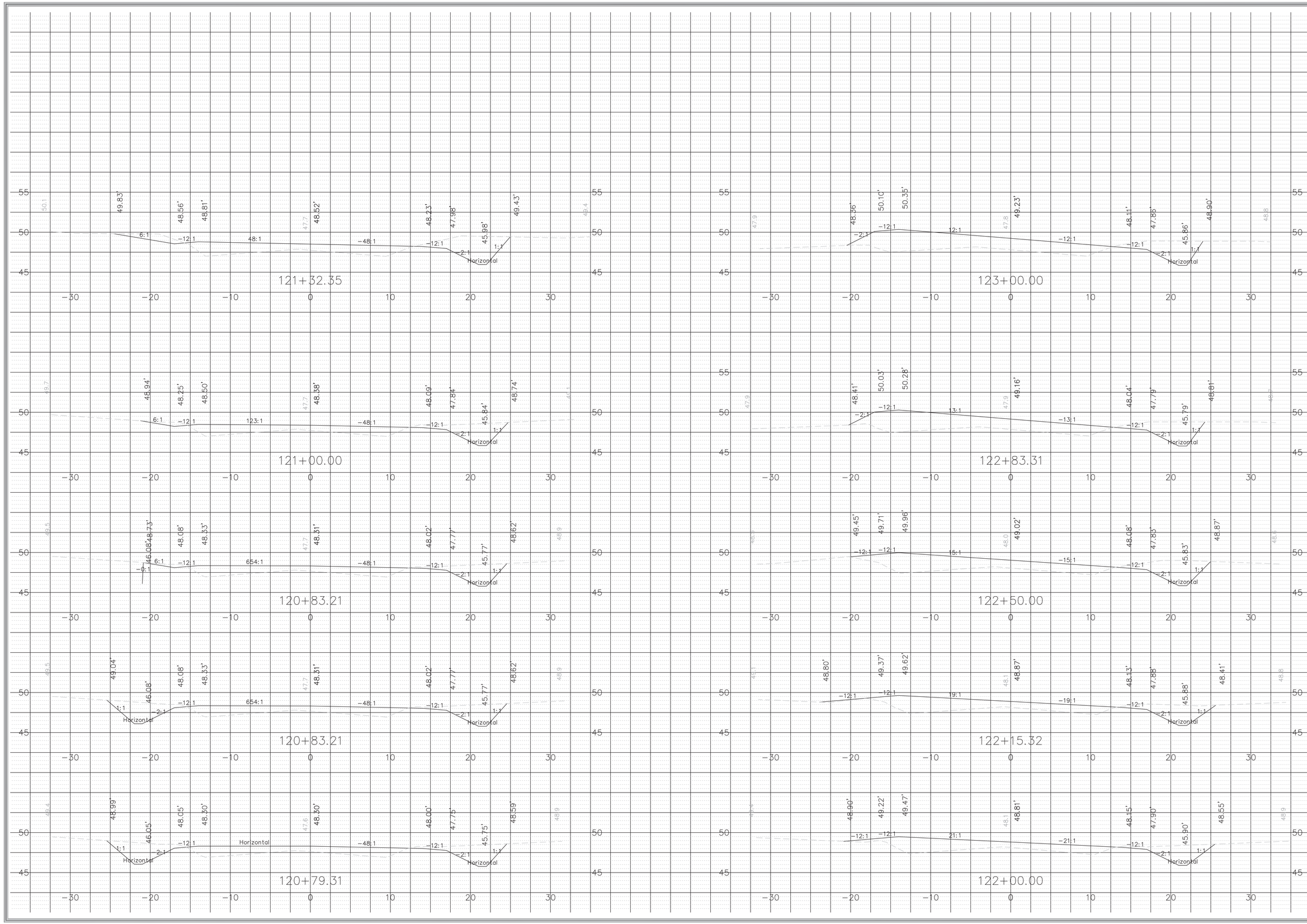
IMPROVEMENTS TO INDIAN HUT ROAD AND AMOS ROAD FOR GEORGETOWN COUNTY

GEORGETOWN COUNTY, SOUTH CAROLINA

PROJECT ID G0004.31

SCALE 1" = 5'

SHEET X21



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SOUTH CAROLINA PROFESSIONAL ENGINEER No. 32702 12/11/20 MATTHEW THOMAS HINES

SOUTH CAROLINA DENNIS CORPORATION NO. 3103 CERTIFICATE OF AUTHORIZATION

ENGINEER	DESIGNER	CHECKED
D. HAMRICK	S. SAUNDERS	M. HINES

CROSS SECTIONS

DENNIS CORPORATION

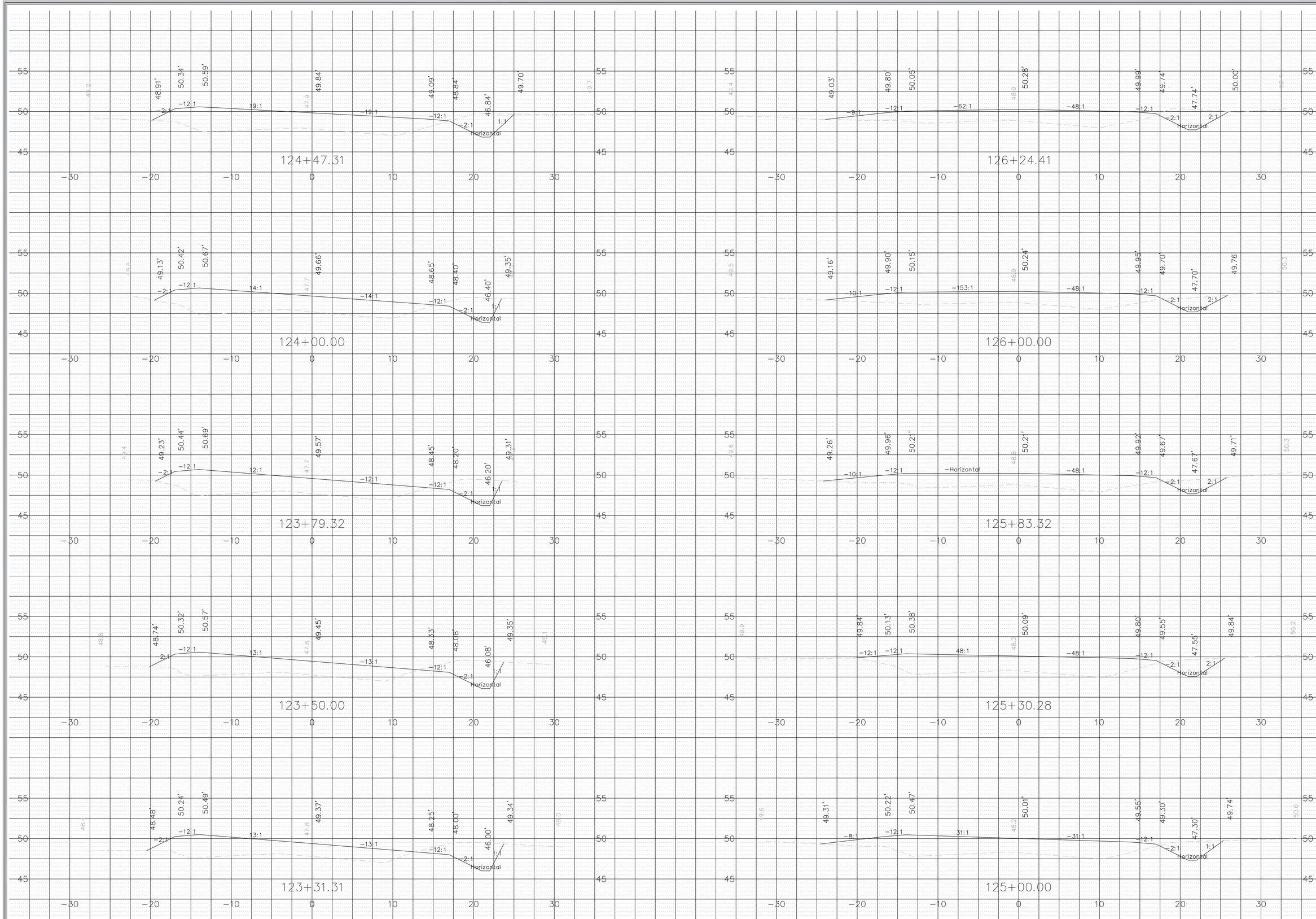
IMPROVEMENTS TO
INDIAN HUT ROAD AND
AMOS ROAD
FOR GEORGETOWN COUNTY

GEORGETOWN COUNTY, SOUTH CAROLINA

PROJECT ID
G0004.31

SCALE
1" = 5'

SHEET
X22



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SOUTH CAROLINA PROFESSIONAL ENGINEER No. 32702 MATTHEW THOMAS HINES 12/11/20

SOUTH CAROLINA DENNIS CORPORATION NO. 3103 CERTIFICATE OF AUTHORIZATION

ENGINEER	DESIGNER	CHECKED
D. HAMRICK	S. SAUNDERS	M. HINES

DENNIS CORPORATION

CROSS SECTIONS

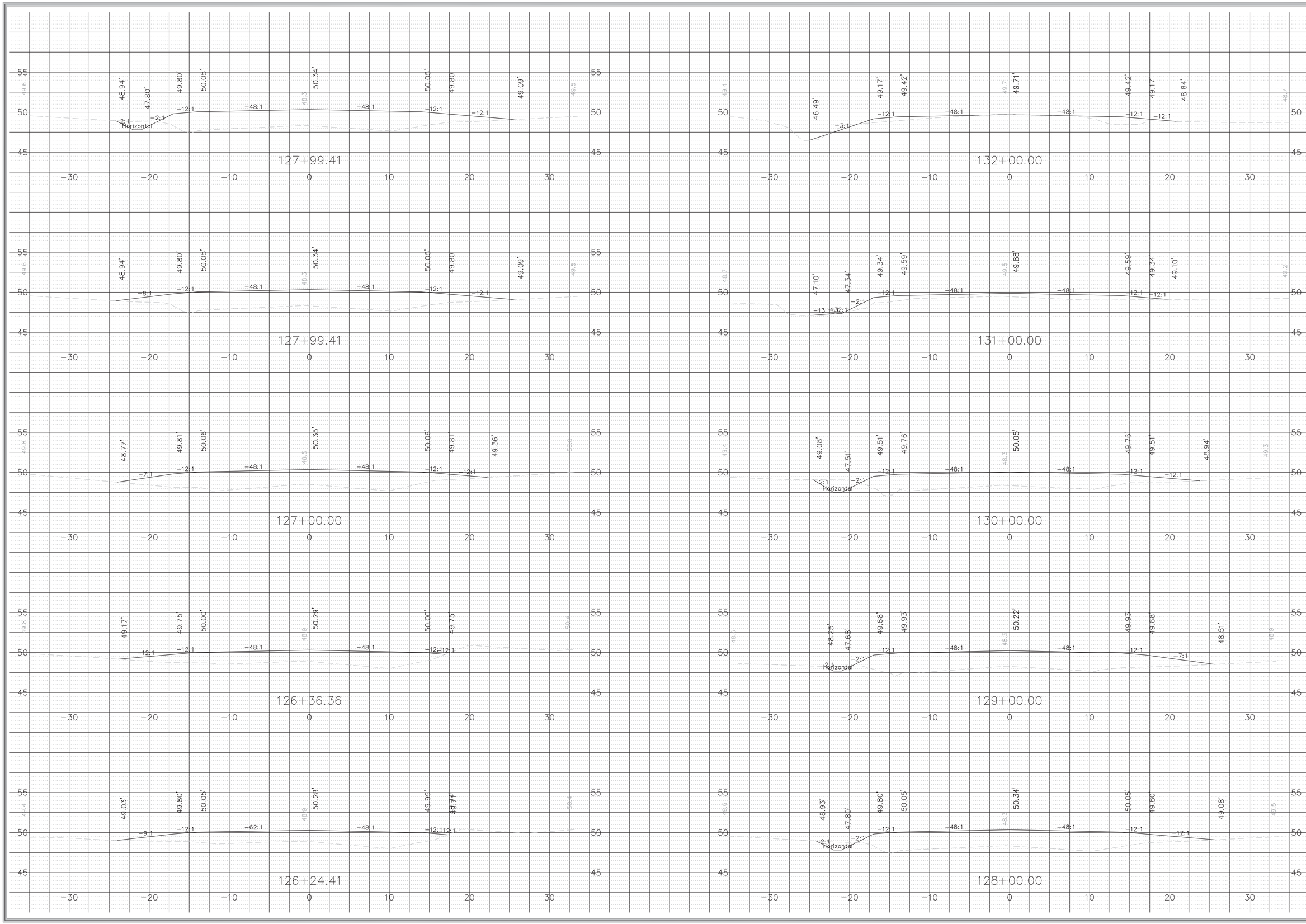
IMPROVEMENTS TO INDIAN HUT ROAD AND AMOS ROAD FOR GEORGETOWN COUNTY

GEORGETOWN COUNTY, SOUTH CAROLINA

PROJECT ID G0004.31

SCALE 1" = 5'

SHEET X23



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SOUTH CAROLINA PROFESSIONAL ENGINEER No. 32702 MATTHEW THOMAS HINES

SOUTH CAROLINA DENNIS CORPORATION NO. 3103 CERTIFICATE OF AUTHORIZATION

ENGINEER	DESIGNER	CHECKED
D. HAMRICK	S. SAUNDERS	M. HINES

DENNIS CORPORATION

CROSS SECTIONS

IMPROVEMENTS TO INDIAN HUT ROAD AND AMOS ROAD FOR GEORGETOWN COUNTY

GEORGETOWN COUNTY, SOUTH CAROLINA

PROJECT ID G0004.31

SCALE 1" = 5'

SHEET X24