TOWN OF PITTSBORO APPROVED FOR CONSTRUCTION	BY	DATE	PERMIT #
WATER (PW)(NCDENR)	N/A		
SEWER (PW)(NCDENR)	N/A		
COUNTY FLOW ACC.	N/A		
STREET (TOWN)			
DRIVEWAY (NCDOT)	N/A		
ENCROACHMENT (NCDOT)			
DRAINAGE (PW)			
EROSION CONTROL (PW)			
PLANNING/ZONING (TOWN)			
FIRE (TOWN)	N/A		

TIP NO. C-5551
WBS ELEMENT 51021.3.1

CONSTRUCTION DRAWINGS FOR US 64 SIDEWALK EXTENSION

5' CONCRETE SIDEWALK ALONG US 64 (EAST STREET) TOWN OF PITTSBORO, CHATHAM COUNTY NORTH CAROLINA

JULY 2, 2014

SHEET INDEX

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DETAILS	D-1
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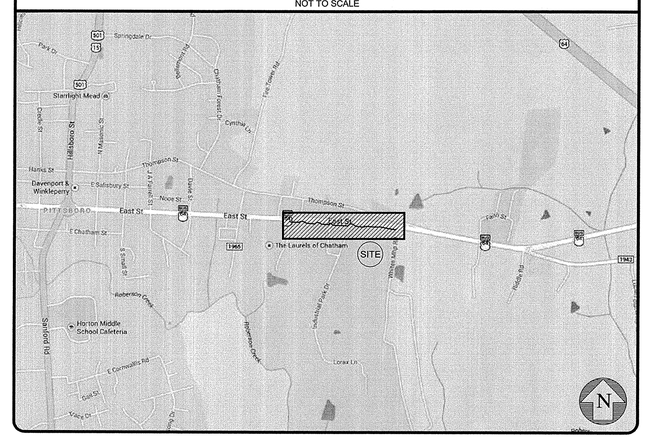
EROSION CONTROL DETAILS	D-3

GENERAL NOTES:

1. CONSTRUCTION ON THIS PROJECT SHALL BE IN ACCORDANCE WITH THE TOWN OF PITTSBORO STANDARD DETAILS, CODE OF ORDINANCES AND STANDARD SPECIFICATIONS AS WELL AS THE 2012 NCDOT ROADWAY STANDARD DRAWINGS AND STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES.
2. THE GRADE LINES DENOTE THE FINISHED ELEVATIONS OF THE PROPOSED SURFACE. GRADE LINES MAY BE ADJUSTED AT THEIR BEGINNING, ENDING AND AT STRUCTURES AS DIRECTED BY THE ENGINEER IN ORDER TO PROVIDE A PROPER TIE-IN. CONTRACTOR SHALL FIELD VERIFY ALL PROPOSED INVERTS, FFE'S & FINISHED SURFACES TO ENSURE THAT MINIMUM SLOPE & COVER REQUIREMENTS ARE PROVIDED PRIOR TO INSTALLATION OF REFERENCED ITEMS.
3. UNDERGROUND UTILITIES MAY EXIST ON, ALONG OR WITHIN CONFLICT OF THIS PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING NC-ONE-CALL OR THE APPROPRIATE UTILITY COMPANIES PRIOR TO ANY EXCAVATION.
4. THE EARTHWORK ON THIS PLAN DOES NOT NECESSARILY BALANCE; OFFSITE BORROW OR WASTE MAY BE REQUIRED.
5. ALL PIPE INVERTS TO BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTING GRAVITY SYSTEMS AND SHALL BE ADJUSTED BY THE ENGINEER IF NECESSARY.
6. ALL CONCRETE PIPE SHALL BE REINFORCED CLASS III.
7. THE CONTRACTOR SHALL PERFORM ALL CONSTRUCTION IN ACCORDANCE WITH LOCAL CITY, COUNTY AND STATE BUILDING CODES.
8. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE DEMOLITION OF ALL EXISTING ON SITE ITEMS, ABOVE AND BELOW GROUND. THE CONTRACTOR IS ALSO RESPONSIBLE FOR REMOVAL OF ALL WASTE RESULTING FROM DEMOLITION, AS WELL AS GRADING AND FILLING OF ALL DEPRESSIONS TO INSURE THE SITE REMAINS AESTHETICALLY ACCEPTABLE.
9. THE CONTRACTOR SHALL OBSERVE ALL REQUIRED SAFETY PRECAUTIONS IN THE PERFORMANCE OF ALL WORK IN ACCORDANCE WITH OSHA.
10. THE CONTRACTOR SHALL GRADE, SEED AND SOD OR OTHERWISE PROVIDE TEMPORARY AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, ESPECIALLY SLOPES. SEE EROSION CONTROL INSTRUCTIONS, IF APPLICABLE.
11. WORK WITHIN PUBLIC RIGHT-OF-WAYS SHALL BE IN ACCORDANCE WITH ALL STATE AND LOCAL REQUIREMENTS, NOTIFICATIONS, STANDARDS AND POLICIES.
12. ANY SUBSTITUTIONS, CHANGES, OR MODIFICATIONS SHALL BE APPROVED BY THE PROJECT ENGINEER, PLANNING DEPARTMENT STAFF, AND DEVELOPER PRIOR TO INSTALLATION/CONSTRUCTION OF CORRESPONDING ITEMS.
13. PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS NECESSARY FOR CONSTRUCTION. THE CONTRACTOR SHALL READ ALL PERMITS AND ENSURE THAT CONSTRUCTION COMPLIES WITH THE PERMITS. REQUIRED PERMITS AND REVIEWS MAY INCLUDE, BUT ARE NOT LIMITED TO: CITY/COUNTY APPROVALS/PERMITS, CITY FIRE DEPARTMENT, SOLID WASTE REVIEWS, NCDOT PERMITS, DRIVEWAY PERMITS, RIGHT OF WAY ENCROACHMENT AGREEMENTS, SOIL AND EROSION CONTROL PERMITS, NCDENR PERMITS, WATER PERMITS, SEWER PERMITS, ENVIRONMENTAL PERMITS, WETLAND DISTURBANCE PERMITS, STREAM CROSSING PERMITS, POWER EASEMENT ENCROACHMENT AGREEMENTS, USACE/DWQ PERMITS, STORMWATER PERMITS, ZONING APPROVAL, AND BUILDING CODE APPROVALS/PERMITS. IF THE CONTRACTOR HAS QUESTIONS ABOUT PERMIT LANGUAGE, OR THE NEED FOR A PERMIT, HE MUST CONTACT THE DEVELOPER AND THE ENGINEER PRIOR TO BEGINNING CONSTRUCTION.

VICINITY MAP

NOT TO SCALE



OWNER / DEVELOPER CONTACT:

FREDRIC T. ROYAL, PE, CFM
TOWN ENGINEER
TOWN OF PITTSBORO, NC 27312
(919) 542-2063 OFFICE
(919) 542- 2310 FAX
FROYAL@PITTSBORONC.GOV

SURVEYOR CONTACT:

WILLIAM MCCARTHY
SUMMIT DESIGN & ENGINEERING
504 MEADOWLAND DRIVE
HILLSBOROUGH, NC 27278
(919) 732-3883 (PHONE)
(919) 732-6676 (FAX)

CIVIL & SITE ENGINEER CONTACT:

CHAD ABBOTT
SUMMIT DESIGN & ENGINEERING SERVICES
504 MEADOWLAND DRIVE
HILLSBOROUGH, NC 27278
(919) 732-3883 (PHONE)
(919) 732-6676 (FAX)
CHAD.ABBOTT@SUMMITDE.NET

PAY ITEMS

TIP No.: C-5551
WBS No.: 51021.3.1
Description: US 64 Bus. Sidewalk Extension
County: Chatham

LINE NO.	ITEM NUMBER	SECT	DESCRIPTION	QUANTITY	UNIT
1	0000100000-N	800	MOBILIZATION	1	LS
2	0000400000-N	801	CONSTRUCTION SURVEYING	1	LS
3	0000930000-E	SP	GENERIC MISCELLANEOUS ITEM, HANDRAIL	12	LF
4	0043000000-N	226	GRADING	1	LS
5	0366000000-E	310	15" RC PIPE CULVERTS, CLASS III	27	LF
6	0372000000-E	310	18" RC PIPE CULVERTS, CLASS III	223	LF
7	2286000000-N	840	MASONRY DRAINAGE STRUCTURE	3	EA
8	2352000000-N	840	FRAME WITH GRATE, STD 840.xx	3	EA
9	2570000000-N	SP	MODIFIED CONCRETE FLUME	1	EA
10	2591000000-E	848	4" CONCRETE SIDEWALK	1,171	SY
11	2600000000-N	SP	RETROFIT EXISTING CURB RAMP	1	EA
12	2605000000-N	848	CONCRETE CURB RAMP	3	EA
13	4457000000-N	1105	TEMPORARY TRAFFIC CONTROL	1	LS
14	4820000000-E	1205	PAINT PAVEMENT MARKING LINES (8")	368	LF
15	6000000000-E	1605	TEMPORARY SILT FENCE	2,010	LF
16	6006000000-E	1610	EROSION CONTROL STONE, CLASS A	50	TON
17	6009000000-E	1610	EROSION CONTROL STONE, CLASS B	24	TON
18	6012000000-E	1610	SEDIMENT CONTROL STONE	50	TON
19	6029000000-E	SP	SAFETY FENCE	2,020	LF
20	6042000000-E	1632	1/4" HARDWARE CLOTH	120.00	LF
21	6071010000-E	SP	WATTLE	70.00	LF
22	6071020000-E	SP	POLYACRYLAMIDE (PAM)	7.00	LBS
23	6084000000-E	1660	SEED & MULCHING	0.80	AC

SITE LOCATION MAP
NOT TO SCALE

PUBLIC SERVICE CONTACTS :

WATER:	TOWN OF PITTSBORO CONTACT: JOHN POTEAT 635 EAST STREET PITTSBORO, NC 27312 (919) 542-4621 EXT 23
SEWER:	TOWN OF PITTSBORO CONTACT: JOHN POTEAT 635 EAST STREET PITTSBORO, NC 27312 (919) 542-4621 EXT 23
FIRE:	PITTSBORO FIRE DEPARTMENT CONTACT: DARYL GRIFFIN PO BOX 573 PITTSBORO, NC 27312 (919) 542-4101
ELECTRIC:	PROGRESS ENERGY CAROLINAS (800) 452-2777
TELEPHONE:	CENTURY LINK (336)625-1006 OR (866) 304-6820
GAS:	PSNC ENERGY (877) 776-2427
STATE ROADWAYS:	NCDOT
SOLID WASTE:	WASTE INDUSTRIES 148 STONE PARK COURT DURHAM, NC 27703 (919) 596-1363
PLANNING:	TOWN OF PITTSBORO CONTACT: STUART BASS 635 EAST STREET PITTSBORO, NC 27312 (919) 542-4621 EXT 34

MODIFIED CONCRETE FLUME WITH CONCRETE OUTLET:
(3-19-96)(Rev. 6-17-08) 823 SP8 R10

At locations shown in the plans, construct concrete flumes, concrete curb, and apron in accordance with the details in the plans. Use materials meeting the requirements of Section 825 of the *2012 Standard Specifications* except that the concrete must be Class B or of higher compressive strength.

Each concrete flume, concrete curb, and apron completed and accepted will be paid at the contract unit price per each for *Modified Concrete Flume*. Such price and payment will be full compensation for all materials, labor, equipment, tools, removing and disposing of the temporary slope drains, and any other incidentals necessary to complete the work satisfactorily.

The concrete curb and ditch outside the pay limits of the apron will be measured and paid in accordance with Section 846 and 850 of the *2012 Standard Specifications*.

Payment will be made under:

Pay ItemPay Unit Modified Concrete FlumeEach

2 BAR HANDRAIL:
(11-17-09) SP1 8-19
Description

Furnish and install 2 Bar Handrail at the location shown in the plans in accordance with the detail in the plans and as directed by the Engineer.

Measurement and Payment

2 Bar Handrail will be measured and paid for as the actual number of linear feet of handrail measured along the top of the handrail to the nearest 0.1 of a foot. Such price and payment will be full compensation for fabricating, furnishing, installing, painting and all incidentals necessary to satisfactorily install the 2 Bar Handrail.

Payment will be made under:

Pay ItemPay Unit2 Bar HandrailLinear Foot

DISTURBED AREA
0.9926 AC

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

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1	REVISIONS	DATE BY

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PROJECT ENGINEER/ARCHITECT: CEA
PROJECT MANAGER: CEA
DRAWN BY: KSW
SCALE: SC-SCALE

NORTH CAROLINA PROFESSIONAL SEAL ENGINEER FREDRIC T. ROYAL 7/15/14

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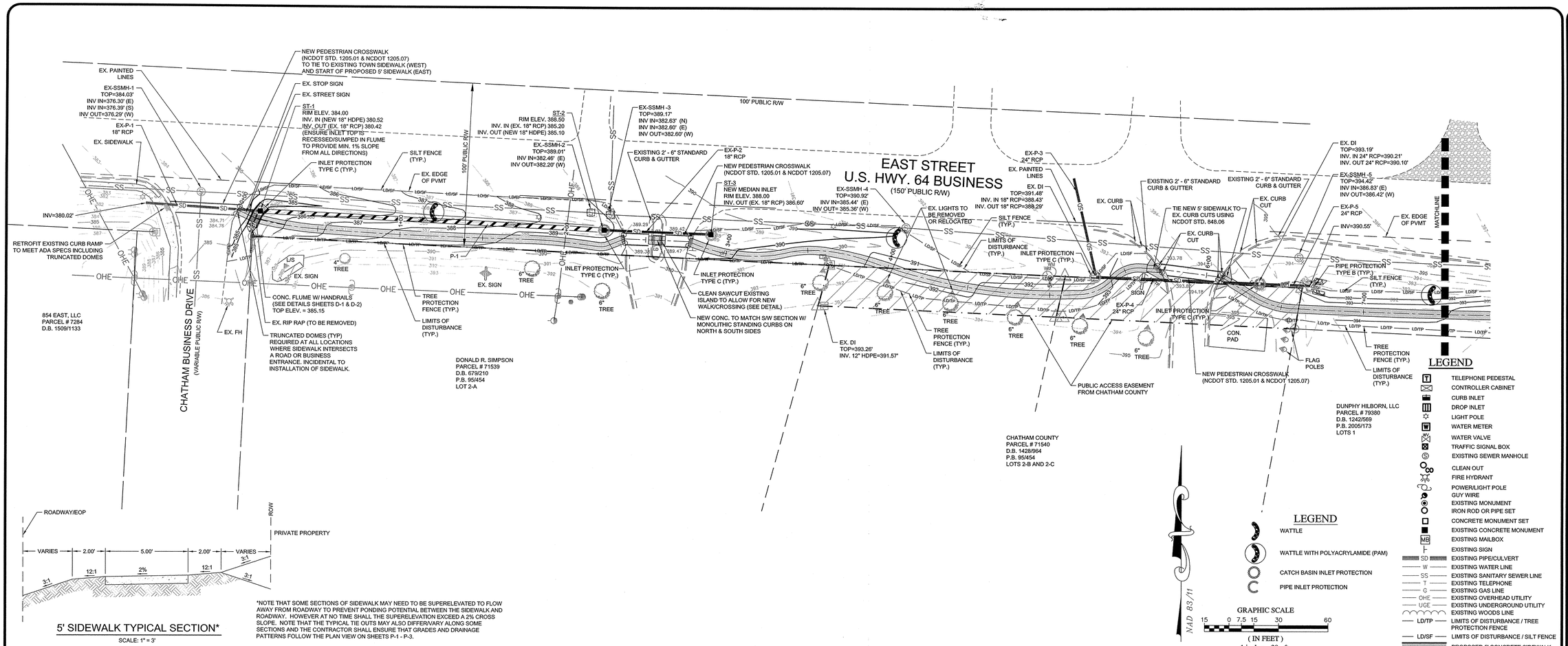
CONSTRUCTION DRAWINGS
US 64 SIDEWALK EXTENSION
PITTSBORO, NC

TITLE SHEET

PROJECT NO. 13-0258
DRAWING NAME: 13-0258_TS-1
SHEET NO. C-1

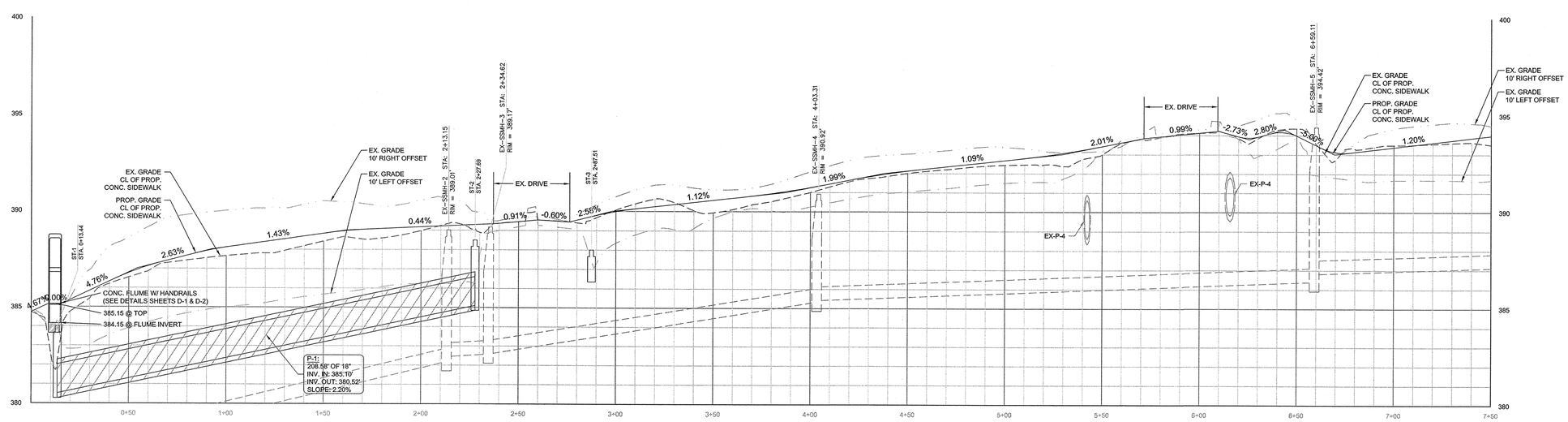


5' SIDEWALK TYPICAL SECTION*

SCALE: 1" = 3'

*NOTE THAT SOME SECTIONS OF SIDEWALK MAY NEED TO BE SUPERELEVATED TO FLOW AWAY FROM ROADWAY TO PREVENT PONDING POTENTIAL BETWEEN THE SIDEWALK AND ROADWAY. HOWEVER AT NO TIME SHALL THE SUPERELEVATION EXCEED A 2% CROSS SLOPE. NOTE THAT THE TYPICAL TIE OUTS MAY ALSO DIFFER/VARY ALONG SOME SECTIONS AND THE CONTRACTOR SHALL ENSURE THAT GRADES AND DRAINAGE PATTERNS FOLLOW THE PLAN VIEW ON SHEETS P-1 - P-3.

PROFILE SCALE
HORIZONTAL 1"=30'
VERTICAL 1"=3'



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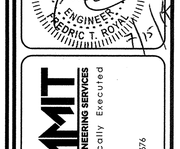
PROJECT ENGINEER/ARCHITECT
CEA

PROJECT MANAGER
CEA

DRAWN BY
JDC

SCALE
1" = 30' PLAN



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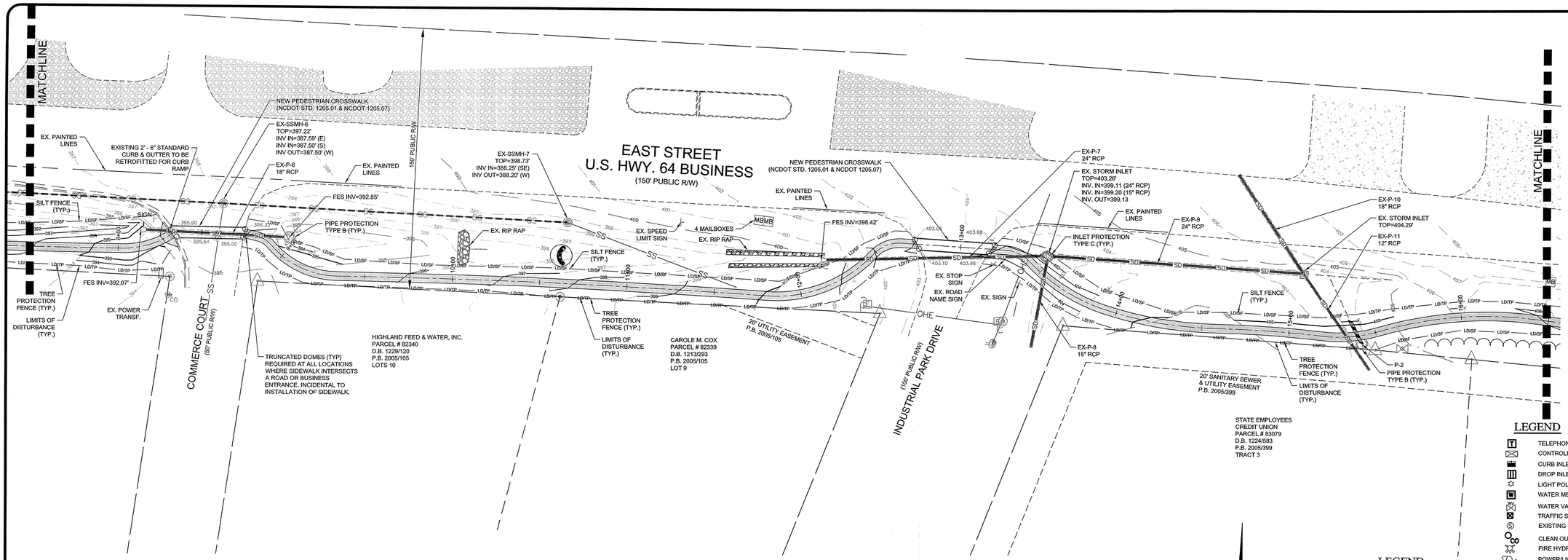
CONSTRUCTION DRAWINGS
US 64 SIDEWALK EXTENSION
PITTSBORO, NC

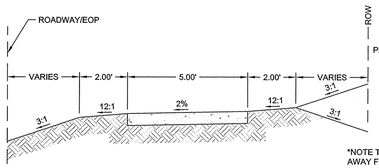
PLAN & PROFILE
STATION 0+00 - 7+50

PROJECT NO.
13-0258

DRAWING NAME:
13-0258_S-1

SHEET NO.
P-1





5' SIDEWALK TYPICAL SECTION*

SCALE: 1" = 3'

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PROFILE SCALE
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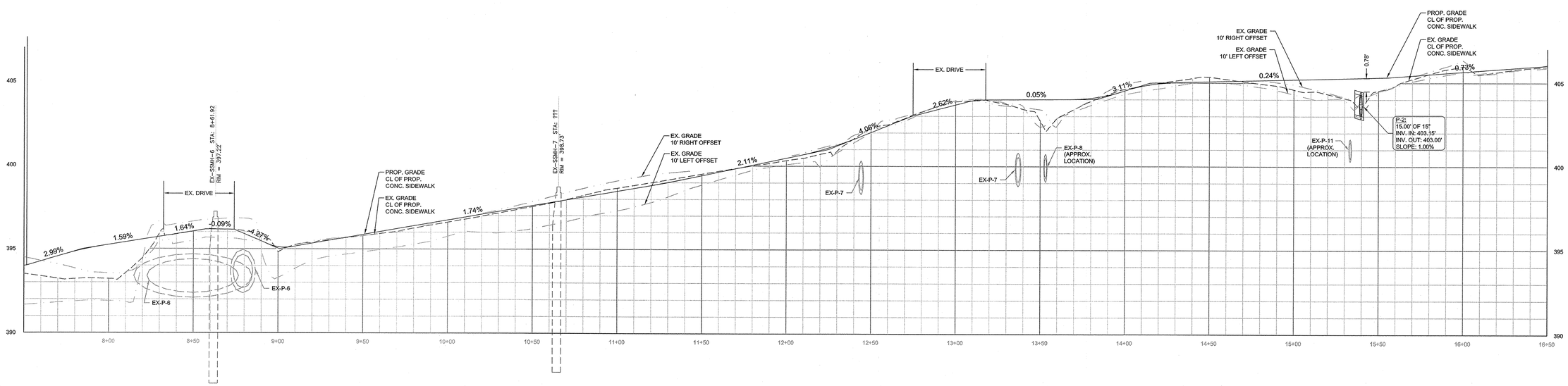
VERTICAL 1"=3'



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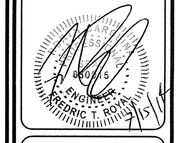
PROJECT ENGINEER/ARCHITECT
CEA

PROJECT MANAGER
CEA

DRAWN BY
JDC

SCALE
1" = 30' PLAN



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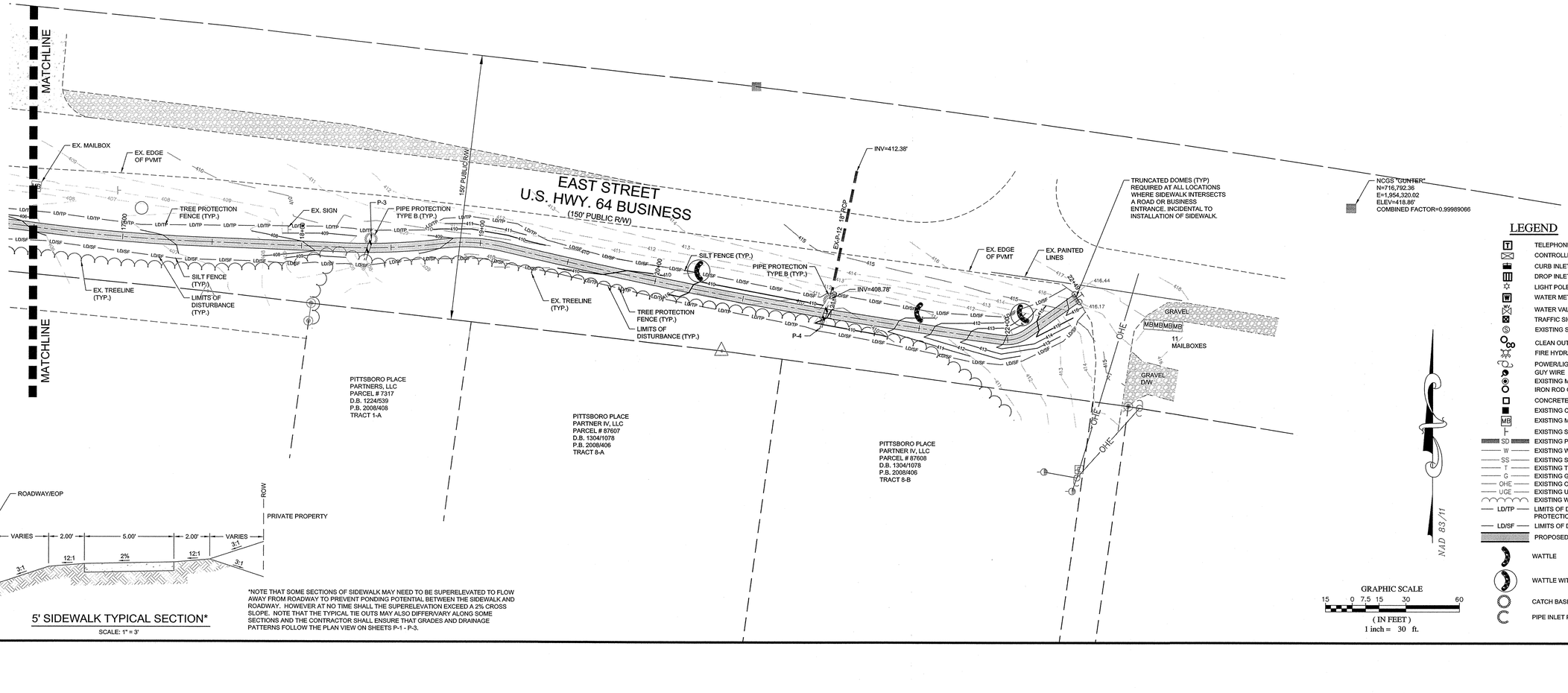
CONSTRUCTION DRAWINGS
US 64 SIDEWALK EXTENSION
PITTSBORO, NC

PLAN & PROFILE
STATION 7+50 - 16+50

PROJECT NO.
13-0258

DRAWING NAME:
13-0258_S-1

SHEET NO.
P-2



LEGEND

- TELEPHONE PEDESTAL
- CONTROLLER CABINET
- CURB INLET
- DROP INLET
- LIGHT POLE
- WATER METER
- WATER VALVE
- TRAFFIC SIGNAL BOX
- EXISTING SEWER MANHOLE
- CLEAN OUT
- FIRE HYDRANT
- POWER/LIGHT POLE
- GUY WIRE
- EXISTING MONUMENT
- IRON ROD OR PIPE SET
- CONCRETE MONUMENT SET
- EXISTING CONCRETE MONUMENT
- MB — EXISTING MAILBOX
- EXISTING SIGN
- SD — EXISTING PIPE/CULVERT
- W — EXISTING WATER LINE
- SS — EXISTING SANITARY SEWER LINE
- T — EXISTING TELEPHONE
- G — EXISTING GAS LINE
- OHE — EXISTING OVERHEAD UTILITY
- U/GE — EXISTING UNDERGROUND UTILITY
- EXISTING WOODS LINE
- LD/TP — LIMITS OF DISTURBANCE / TREE PROTECTION FENCE
- LD/SF — LIMITS OF DISTURBANCE / SILT FENCE
- PROPOSED 5' CONCRETE SIDEWALK
- WATTLE
- WATTLE WITH POLYACRYLAMIDE (PAM)
- CATCH BASIN INLET PROTECTION
- PIPE INLET PROTECTION

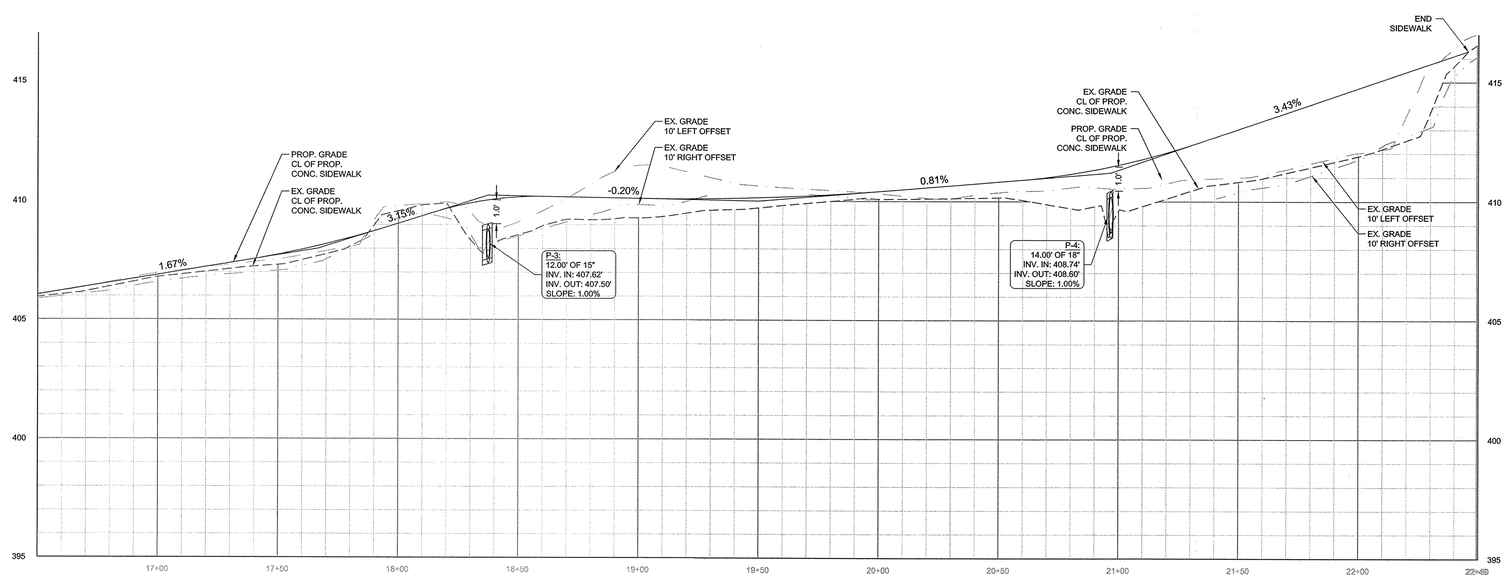
5' SIDEWALK TYPICAL SECTION*

SCALE: 1" = 3'

*NOTE THAT SOME SECTIONS OF SIDEWALK MAY NEED TO BE SUPERELEVATED TO FLOW AWAY FROM ROADWAY TO PREVENT PONDING POTENTIAL BETWEEN THE SIDEWALK AND ROADWAY. HOWEVER AT NO TIME SHALL THE SUPERELEVATION EXCEED A 2% CROSS SLOPE. NOTE THAT THE TYPICAL TIE OUTS MAY ALSO DIFFER/VARY ALONG SOME SECTIONS AND THE CONTRACTOR SHALL ENSURE THAT GRADES AND DRAINAGE PATTERNS FOLLOW THE PLAN VIEW ON SHEETS P-1 - P-3.

PROFILE SCALE
HORIZONTAL 1"=30'
VERTICAL 1"=3'

LEGEND



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PROJECT ENGINEER/ARCHITECT
CEA
PROJECT MANAGER
CEA

DRAWN BY
JDC
SCALE
1" = 30' PLAN

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 030475 CEDRIC T. ROYAL

7/15/14

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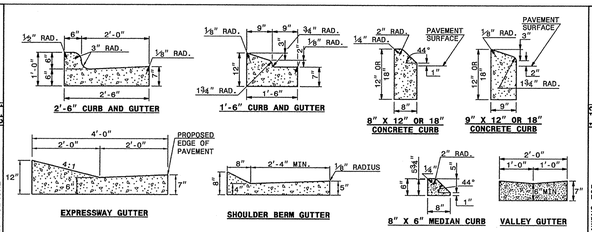
CONSTRUCTION DRAWINGS
US 64 SIDEWALK EXTENSION
PITTSBORO, NC

PLAN & PROFILE
STATION 16+50 - 22+50

PROJECT NO.
13-0258
DRAWING NAME:
13-0258_S-1
SHEET NO.
P-3

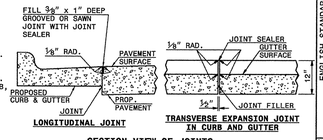
STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIV. OF HIGHWAYS RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR **CONCRETE CURB, GUTTER AND CURB & GUTTER**



SECTION VIEW OF CURBS OR CURBS AND GUTTERS

GENERAL NOTES:
-PLACE CONTRACTION JOINTS AT 10' INTERVALS, EXCEPT THAT A 15' SPACING MAY BE USED WHEN A MACHINE IS USED OR WHEN SATISFACTORY SUPPORT FOR THE FACE FORM CAN BE OBTAINED WITHOUT THE USE OF TEMPLATES AT 10' INTERVALS.
-JOINT SPACING MAY BE ALTERED IF REQUIRED BY THE ENGINEER.
-CONTRACTION JOINTS MAY BE INSTALLED WITH THE USE OF TEMPLATES OR FORMED BY OTHER APPROVED METHODS.
-CONSTRUCT NON-TEMPLATE FORMED JOINTS A MIN. OF 1½" DEEP.
-FILL ALL CONSTRUCTION JOINTS, EXCEPT IN 8"x6" MEDIAN CURB, WITH JOINT FILLER AND SEALER.
-SPACE EXPANSION JOINTS AT 90' INTERVALS AND ADJACENT TO ALL RIGID OBJECTS.



LONGITUDINAL JOINT — TRANSVERSE EXPANSION JOINT IN CURB AND GUTTER

SECTION VIEW OF JOINTS

SHEET 1 OF 3 — 846.01

ENGLISH STANDARD DRAWING FOR **CONCRETE CURB, GUTTER AND CURB & GUTTER**

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

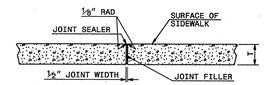
ENGLISH STANDARD DRAWING FOR **CONCRETE SIDEWALK**

NOTES:

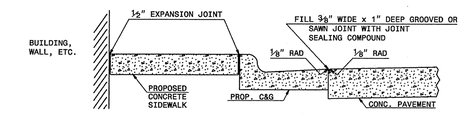
CONSTRUCT STANDARD SIDEWALK 5' WIDE AND 4" THICK UNLESS OTHERWISE DENOTED ON PLANS.

PLACE A GROOVE JOINT 1" DEEP WITH ⅛" RADII IN THE CONCRETE SIDEWALK AT 5' INTERVALS. ONE ½" EXPANSION JOINT WILL BE REQUIRED AT 50' INTERVALS. A ½" EXPANSION JOINT WILL BE REQUIRED WHERE THE SIDEWALK JOINS ANY RIGID STRUCTURE.

SEE STD. DWG. 848.05 FOR CURB RAMP LOCATION REQUIREMENTS AND CONSTRUCTION GUIDELINES.



TRANSVERSE EXPANSION JOINT IN SIDEWALK



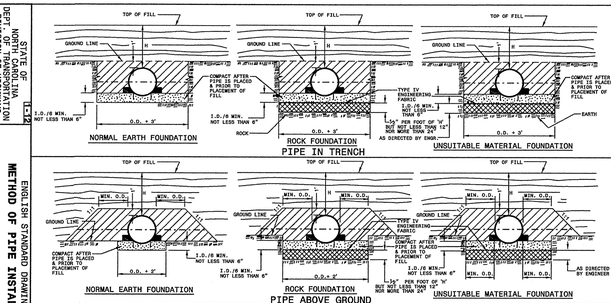
DETAILS SHOWING JOINTS IN CONCRETE SIDEWALK

SHEET 1 OF 1 — 848.01

ENGLISH STANDARD DRAWING FOR **CONCRETE SIDEWALK**

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR **METHOD OF PIPE INSTALLATION** FLEXIBLE PIPE



GENERAL NOTES:
I.D. = THE MAXIMUM HORIZONTAL INSIDE DIAMETER DIMENSION.
O.D. = THE MAXIMUM HORIZONTAL OUTSIDE DIAMETER DIMENSION.
H = THE FILL HEIGHT MEASURED VERTICALLY AT ANY POINT ALONG THE PIPE FROM THE TOP OF THE PIPE TO THE TOP OF THE EMBANKMENT AT THAT POINT.
TAKE CARE TO FULLY COMPACT haunch ZONE OF PIPE BACKFILL.
LOOSELY PLACED SELECT MATERIAL CLASS III OR CLASS II, TYPE 1 FOR PIPE BEDDING. LEAVE SECTION DIRECTLY BENEATH PIPE UNCOMPACTED AS PIPE SEATING AND BACKFILL WILL ACCOMPLISH COMPACTION.

DO NOT OPERATE HEAVY EQUIPMENT OVER ANY PIPE CULVERT UNTIL THE PIPE CULVERT HAS BEEN PROPERLY BACKFILLED AND COVERED WITH AT LEAST 3 FEET OF APPROVED MATERIAL.
SPRINGLINE OF PIPE
SELECT BACKFILL MATERIAL CLASS III OR CLASS II, TYPE 1 ABOVE AND BELOW SPRINGLINE.
APPROVED SUITABLE LOCAL MATERIAL.
UNDISTURBED EARTH MATERIAL
SELECT MATERIAL CLASS V OR VI FOR FOUNDATION CONDITIONING. ENCAPSULATE WITH ENGINEERING FABRIC AS DIRECTED BY THE ENGINEER.

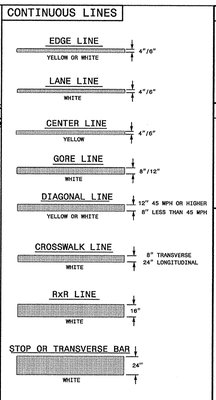
SHEET 1 OF 3 — 300.01

ENGLISH STANDARD DRAWING FOR **METHOD OF PIPE INSTALLATION** FLEXIBLE PIPE

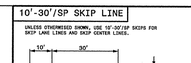
STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR **PAVEMENT MARKINGS** LINE TYPES AND OFFSETS

CONTINUOUS LINES

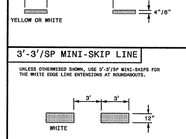


10'-30'/SP SKIP LINE

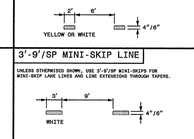


2'-6'/SP MINI-SKIP LINE

3'-3'/SP MINI-SKIP LINE



3'-9'/SP MINI-SKIP LINE



GENERAL NOTES:
1- USE 6" LANE, EDGE, AND CENTER LINES ON ALL FULL CONTROL OF ACCESS FACILITIES AND OTHER ROUTES AS DIRECTED BY THE ENGINEER.
2- LANE LINES INDICATED AS "WIDE" ON THE ROADWAY STANDARD DRAWINGS SHALL BE AT LEAST TWICE THE WIDTH OF THE NORMAL LINE.
3- GORE LINES SHALL BE TWICE THE WIDTH OF THE NORMAL LINE.

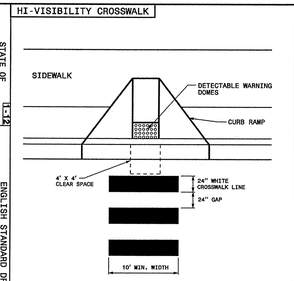
SHEET 1 OF 2 — 1205.01

ENGLISH STANDARD DRAWING FOR **PAVEMENT MARKINGS** LINE TYPES AND OFFSETS

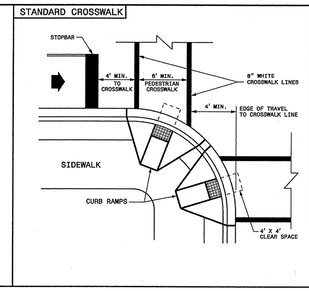
STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR **PAVEMENT MARKINGS** PEDESTRIAN CROSSWALKS

HI-VISIBILITY CROSSWALK



STANDARD CROSSWALK



LEGEND
DIRECTION OF TRAFFIC FLOW
CURB RAMP WITH DETECTABLE WARNING DOMES

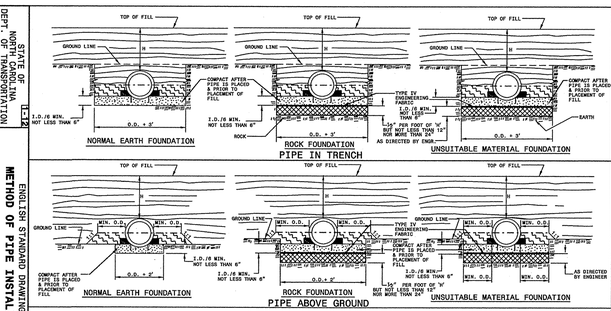
1- THE MINIMUM WIDTH OF STANDARD CROSSWALKS IS 6 FEET. THE MINIMUM WIDTH OF HI-VISIBILITY CROSSWALKS IS 10 FEET.
2- SET BACK DISTANCE FROM INSIDE CROSSWALK MARKING TO NEAREST EDGE OF TRAVEL IS 4' MIN.
3- BEYOND THE CURB FACE, A CLEAR SPACE OF 4' X 4' FEET MINIMUM SHALL BE PROVIDED WITHIN THE WIDTH OF THE CROSSWALK.
4- PLACE STOP BARS A MINIMUM OF 4 FEET FROM NEAREST CROSSWALK LINE. STOP BARS AT SIGNALIZED INTERSECTIONS SHOULD BE COORDINATED WITH THE SIGNAL DESIGN SECTION OR AS DIRECTED BY THE ENGINEER.
5- CURB RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE TO THE LATEST NCDOT ROADWAY STANDARD DRAWINGS.

SHEET 1 OF 1 — 1205.07

ENGLISH STANDARD DRAWING FOR **PAVEMENT MARKINGS** PEDESTRIAN CROSSWALKS

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR **METHOD OF PIPE INSTALLATION** RIGID PIPE

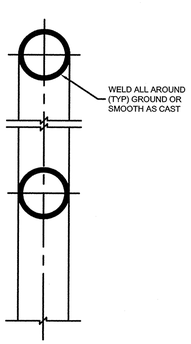


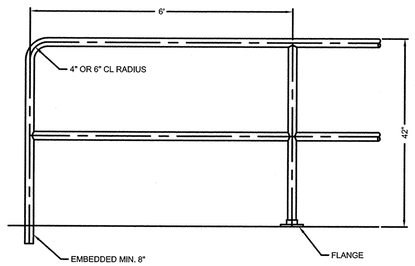
GENERAL NOTES:
I.D. = THE MAXIMUM HORIZONTAL INSIDE DIAMETER DIMENSION.
O.D. = THE MAXIMUM HORIZONTAL OUTSIDE DIAMETER DIMENSION.
H = THE FILL HEIGHT MEASURED VERTICALLY AT ANY POINT ALONG THE PIPE FROM THE TOP OF THE PIPE TO THE TOP OF THE EMBANKMENT AT THAT POINT.
TAKE CARE TO FULLY COMPACT HAUNCH ZONE OF PIPE BACKFILL.
LOOSELY PLACED SELECT MATERIAL CLASS III OR CLASS II, TYPE 1 FOR PIPE BEDDING. LEAVE SECTION DIRECTLY BENEATH PIPE UNCOMPACTED AS PIPE SEATING AND BACKFILL WILL ACCOMPLISH COMPACTION.

DO NOT OPERATE HEAVY EQUIPMENT OVER ANY PIPE CULVERT UNTIL THE PIPE CULVERT HAS BEEN PROPERLY BACKFILLED AND COVERED WITH AT LEAST 3 FEET OF APPROVED MATERIAL.
SPRINGLINE OF PIPE
SELECT BACKFILL MATERIAL CLASS III OR CLASS II, BELOW SPRINGLINE.
APPROVED SUITABLE LOCAL MATERIAL ABOVE SPRINGLINE.
UNDISTURBED EARTH MATERIAL
SELECT MATERIAL CLASS V OR VI FOR FOUNDATION CONDITIONING. ENCAPSULATE WITH ENGINEERING FABRIC AS DIRECTED BY THE ENGINEER.

SHEET 2 OF 3 — 300.01

ENGLISH STANDARD DRAWING FOR **METHOD OF PIPE INSTALLATION** RIGID PIPE

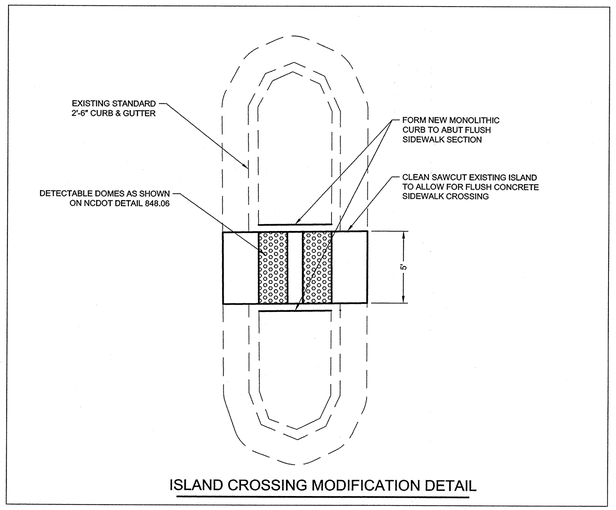




MATERIAL: 1 1/2" SCH.40 ALUM. PIPE (1.900" O.D. x .145"thk.)

FINISH: BAKED ENAMEL, KYNAR, ANODIZED, DURANODIC & POWDER COAT (COLOR TBD BY TOWN OF PITTSBORO)

2-LINE 1 1/2" STEEL PIPE RAILING
NOT TO SCALE



ISLAND CROSSING MODIFICATION DETAIL

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR **METHOD OF PIPE INSTALLATION** FILL HEIGHT TABLES

FLEXIBLE PIPE

Round Corrugated Steel Pipe
2 2/3 x ½ corrugation **

Diameter (inches)	Minimum cover (inches)	Maximum Height of Cover (feet) (Ga) 16	14	12	10	8
12	12		204	256		
15	12		162	204		
18	12		135	169	239	
21	12		115	145	204	
24	12		100	126	178	
30	12		79	100	142	
36	12		65	83	117	152
42	12		55	70	100	130 160
48	12		48	61	87	113 139
54	12			54	77	100 123
60	12				69	90 111
66	12					81 100
72	12					74 91
78	12					81
84	12					69

Round Corrugated Aluminum Pipe
2 2/3 x ½ corrugation **

Diameter (inches)	Minimum cover (inches)	Maximum Height of Cover (feet) (Ga) 16	14	12	10	8
12	12	123	155	218	281	344
15	12	98	123	174	224	275
18	12	81	102	144	187	228
21	12	69	87	123	160	195
24	12	60	76	108	139	171
27	12		67	95	123	151
30	12		60	85	111	136
36	12		50	71	92	113
42	12			60	79	96
48	12			52	68	84
54	12			48	50	74
60	12				50	62
66	12					51
72	12					41

** FOR DIFFERENT CORRUGATIONS AND ARCH PIPES REFER TO ROADWAY DESIGN MANUAL OR MANUFACTURERS SPECIFICATION.

REFER TO THE FOLLOWING FOR PIPE SPECIFICATIONS
CSP - AASHTO M30
CAAP - AASHTO M196
HDPE - AASHTO M294
PVC - ASTM F949 or AASHTO M304

HDPE - * (Minimum fill) 2' for pipe diameters ≥ 12" and ≤ 60"
* (Maximum fill) 20' for pipe diameters ≤ 24"
17' for pipe diameters ≥ 30" and ≤ 60"

PVC - * (Minimum fill) 2' for pipe diameters ≥ 12" and ≤ 36"
* (Maximum fill) 30' for pipe diameters ≥ 12" and ≤ 36"

* FILL HEIGHT IS MEASURED FROM THE TOP OF THE PIPE TO THE BOTTOM OF THE PAVEMENT STRUCTURE

NOTES: FILL HEIGHTS SHOWN WERE CALCULATED USING AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

1' MINIMUM COVER FOR ALL SIDE DRAIN PIPE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS

RIGID PIPE

RCP - * (Minimum fill) 1' for Class IV & CLASS V
2' for Class III & Class II

* (Maximum fill) 10' - Class II pipe
20' - Class III pipe
30' - Class IV pipe
40' - Class V pipe

(For fills > 40' & < 80' use LRFD Direct Ø&sign Method)

* FILL HEIGHT IS MEASURED FROM THE TOP OF THE PIPE TO THE BOTTOM OF THE PAVEMENT STRUCTURE

REFER TO THE FOLLOWING FOR PIPE SPECIFICATIONS
RCP - AASHTO M170

NOTES: FILL HEIGHTS SHOWN WERE CALCULATED USING AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

1' MINIMUM COVER FOR ALL SIDE DRAIN PIPE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS

SHEET 3 OF 3 — 300.01

ENGLISH STANDARD DRAWING FOR **METHOD OF PIPE INSTALLATION** FILL HEIGHT TABLES

	BY	DATE
7		
6		
5		
4		
3		
2		
1		

REVISIONS

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CONSTRUCTION DRAWINGS
US 64 SIDEWALK EXTENSION
PITTSBORO, NC

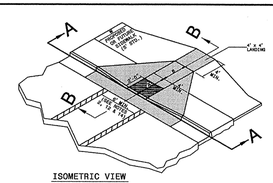
DETAILS

PROJECT NO. 13-0258
DRAWING NAME: 13-0258_D-1
SHEET NO. D-1

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

1-12

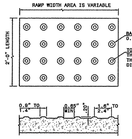
ENGLISH STANDARD DRAWING FOR **CURB RAMP** PROPOSED CURB AND GUTTER



ISOMETRIC VIEW

PAY LIMITS FOR CURB RAMP

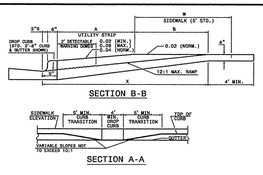
NOTES:
1. DETECTABLE WARNING DOMES WILL COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMPS FOR DETAILS, SEE DETECTABLE WARNING DOMES DETAILS.
2. DETECTABLE WARNING DOMES WILL CONTRAST VISIBILITY WITH ADJOINING SURFACE, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT SEQUENCE COVERING THE ENTIRE RAMP.



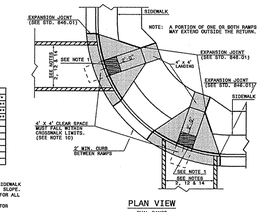
DETECTABLE WARNING DOMES

W	A	WA=X*	S	B
4'	0.0'	4.0'	5.0'	8.0'**
4'	0.0'	4.0'	6.0'	8.0'**
4'	0.0'	4.0'	7.0'	8.0'**
4'	0.0'	4.0'	7.5'	8.0'**
4'	0.5'	4.5'	8.0'	8.0'
4'	1.0'	5.0'	8.5'	8.5'
4'	2.0'	6.0'	9.0'	9.0'
4'	3.0'	7.0'	9.5'	9.5'
4'	4.0'	8.0'	10.0'	10.0'
4'	5.0'	9.0'	10.5'	10.5'
4'	6.0'	10.0'	11.0'	11.0'
5'	0.0'	10.0'	8.0'	13.1'

B = X-(A+W*)
B = DISTANCE FROM FRONT EDGE OF SIDEWALK TO BACK POINT OF 12:1 (8.33%) SLOPE.
* BACK OF SIDEWALK DROP REQUIRED FOR ALL SIDEWALK SLOPES.
** BACK OF SIDEWALK DROP REQUIRED FOR SIDEWALK SLOPES 0.04.



SECTION B-B



SECTION A-A

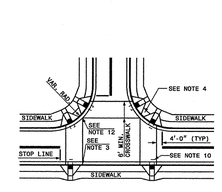
PLAN VIEW
DUAL RAMPS ANY RADII (4' MIN. FLOOR WIDTH)

SHEET 1 OF 3
848.05

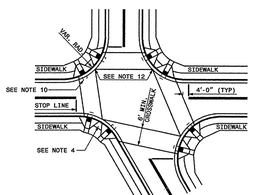
STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

1-12

ENGLISH STANDARD DRAWING FOR **CURB RAMP** PROPOSED CURB AND GUTTER



DETAIL SHOWING TYPICAL LOCATION OF CURB RAMPS, PEDESTRIAN CROSSWALKS AND STOP LINES FOR TEE INTERSECTIONS



DETAIL SHOWING TYPICAL LOCATION OF CURB RAMPS, PEDESTRIAN CROSSWALKS AND STOP LINES

ROADWAY PLAN SYMBOL OR FOR PROPOSED CURB RAMP

PROPOSED CURB RAMP W/ LANDING
PROPOSED OR FUTURE SIDEWALK

ALLOWABLE LOCATIONS
DUAL RAMP RADII.....ANY

SHEET 2 OF 3
848.05

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

1-12

ENGLISH STANDARD DRAWING FOR **CURB RAMPS** NOTES

NOTES:
1. CONSTRUCT THE RAMP SURFACE TO BE STABLE, FIRM, AND SLIP RESISTANT. CONSTRUCT THE CURB RAMP TYPE AS SHOWN IN THE PAVEMENT MARKING PLANS OR AS DIRECTED BY THE ENGINEER.
2. LOCATE CURB RAMPS AND PLACE PEDESTRIAN CROSSWALK MARKINGS AS SHOWN IN THE PAVEMENT MARKING PLANS. WHEN FIELD ADJUSTMENTS REQUIRE MOVING CURB RAMPS OR MARKINGS AS SHOWN, CONTACT THE SIGNING AND DELINEATION UNIT OR LOCATE AS DIRECTED BY THE ENGINEER.
3. COORDINATE THE CURB RAMP AND THE PEDESTRIAN CROSSWALK MARKINGS SO A 4'x4' CLEAR SPACE AT THE BASE OF THE CURB RAMP WILL FALL WITHIN THE PEDESTRIAN CROSSWALK LINES.
4. SET BACK DISTANCE FROM INSIDE CROSSWALK MARKING TO NEAREST EDGE OF TRAVEL LANE IS 4' MINIMUM.
5. REFER TO THE PAVEMENT MARKING PLANS FOR STOP BAR LOCATIONS AT SIGNALIZED INTERSECTIONS. IF A PAVEMENT MARKING PLAN IS NOT PROVIDED, CONTACT THE SIGNAL DESIGN SECTION FOR THE STOP BAR LOCATIONS OR LOCATE AS DIRECTED BY THE ENGINEER.
6. TERMINATE PARKING A MINIMUM OF 20' BACK OF A PEDESTRIAN CROSSWALK.
7. CONSTRUCT CURB RAMPS A MINIMUM OF 4' WIDE.
8. CONSTRUCT THE RUNNING SLOPE OF THE RAMP 8.33% MAXIMUM.
9. ALLOWABLE CROSS SLOPE ON SIDEWALKS AND CURB RAMPS WILL BE 2% MAXIMUM.
10. CONSTRUCT THE SIDE FLARE SLOPE A MAXIMUM OF 10% MEASURED ALONG THE CURB LINE.
11. CONSTRUCT THE COUNTER SLOPE OF THE GUTTER OR STREET AT THE BASE OF THE CURB RAMP A MAXIMUM OF 5% AND MAINTAIN A SMOOTH TRANSITION.
12. CONSTRUCT LANDINGS FOR SIDEWALK A MINIMUM OF 4'x4' WITH A MAXIMUM SLOPE OF 2% IN ANY DIRECTION. CONSTRUCT LANDINGS FOR MEDIAN ISLANDS A MINIMUM OF 5'x5' WITH A MAXIMUM SLOPE OF 2% IN ANY DIRECTION.
13. TO USE A MEDIAN ISLAND AS A PEDESTRIAN REFUGE AREA, MEDIAN ISLANDS WILL BE A MINIMUM OF 6' WIDE. CONSTRUCT MEDIAN ISLANDS TO PROVIDE PASSAGE OVER OR THROUGHT THE ISLAND.
14. SMALL CHANNELIZATION ISLANDS THAT CAN NOT PROVIDE A 5'X5' LANDING AT THE TOP OF A RAMPS, WILL BE CUT THROUGH LEVEL WITH THE SURFACE STREET.
15. CURB RAMPS WITH RETURNED CURBS MAY BE USED ONLY WHERE PEDESTRIANS WOULD NOT NORMALLY WALK ACROSS THE RAMP. THE ADJACENT SURFACE IS PLANTING OR OTHER NON-WALKING SURFACE OR THE SIDE APPROACH IS SUBSTANTIALLY OBSTRUCTED.
16. PLACE A ½" EXPANSION JOINT WHERE THE CONCRETE CURB RAMP JOINS THE CURB AS SHOWN IN ROADWAY STANDARD DRAWING 848.01
17. PLACE ALL PEDESTRIAN PUSH BUTTON ACTUATORS AND CROSSING SIGNALS AS SHOWN IN THE PLANS OR AS SHOWN IN THE MUTCD.
18. CURB RAMPS THROUGH MEDIAN ISLANDS, SINGLE RAMPS AT DUAL CROSSWALKS OR LIMITED R/W SITUATIONS, WILL BE HANDLED BY SPECIAL DETAILS. CONTACT THE CONTRACT STANDARDS AND DEVELOPMENT UNIT FOR THE DETAILS OR FOR A SPECIAL DESIGN.

ENGLISH STANDARD DRAWING FOR **CURB RAMPS** NOTES

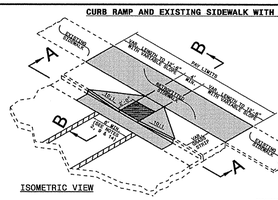
SHEET 3 OF 3
848.05

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

1-12

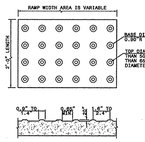
ENGLISH STANDARD DRAWING FOR **CURB RAMP** EXISTING CURB AND GUTTER

CURB RAMP AND EXISTING SIDEWALK WITH GRASS STRIP

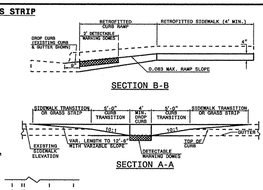


ISOMETRIC VIEW

PAY LIMITS OF CURB RAMP

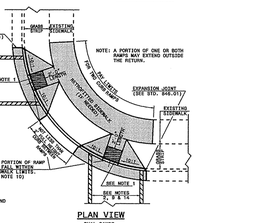


DETECTABLE WARNING DOMES



SECTION B-B

SECTION A-A



PLAN VIEW
DUAL RAMPS ANY RADII (40' MIN. FLOOR WIDTH)

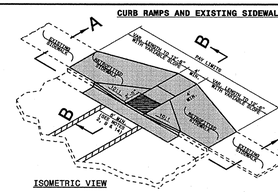
SHEET 1 OF 5
848.06

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

1-12

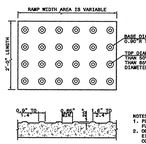
ENGLISH STANDARD DRAWING FOR **CURB RAMP** EXISTING CURB AND GUTTER

CURB RAMPS AND EXISTING SIDEWALK ADJACENT TO CURB

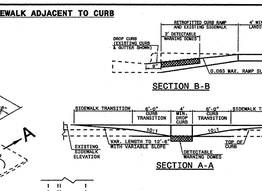


ISOMETRIC VIEW

PAY LIMITS OF CURB RAMP

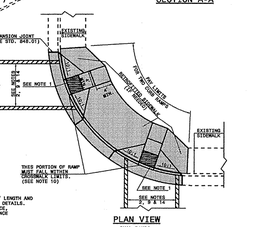


DETECTABLE WARNING DOMES



SECTION B-B

SECTION A-A



PLAN VIEW
DUAL RAMPS ANY RADII (40' MIN. FLOOR WIDTH)

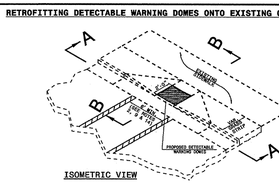
SHEET 2 OF 5
848.06

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

1-12

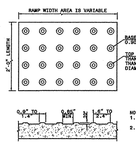
ENGLISH STANDARD DRAWING FOR **CURB RAMP** EXISTING CURB AND GUTTER

RETROFITTING DETECTABLE WARNING DOMES ONTO EXISTING CURB RAMP

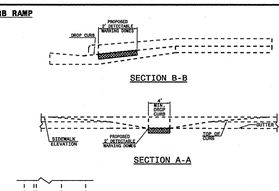


ISOMETRIC VIEW

PAY LIMITS OF RETROFIT CURB RAMP

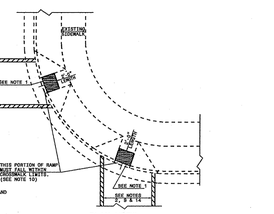


DETECTABLE WARNING DOMES



SECTION B-B

SECTION A-A



PLAN VIEW
DUAL RAMPS ANY RADII (40' MIN. FLOOR WIDTH)

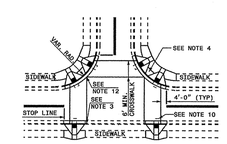
SHEET 3 OF 5
848.06

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

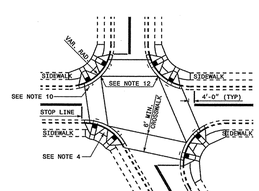
1-12

ENGLISH STANDARD DRAWING FOR **CURB RAMP** EXISTING CURB AND GUTTER

CURB RAMPS AND EXISTING SIDEWALK



DETAIL SHOWING TYPICAL LOCATION OF CURB RAMPS, PEDESTRIAN CROSSWALKS AND STOP LINES FOR TEE INTERSECTIONS



DETAIL SHOWING TYPICAL LOCATION OF CURB RAMPS, PEDESTRIAN CROSSWALKS AND STOP LINES

RESURFACING PROJECTS

PROPOSED CURB RAMP W/ LANDING FOR RESURFACING PROJECTS
EXISTING SIDEWALK

ALLOWABLE LOCATIONS
DUAL RAMP RADII.....ANY

SHEET 4 OF 5
848.06

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

1-12

ENGLISH STANDARD DRAWING FOR **CURB RAMP** EXISTING CURB AND GUTTER

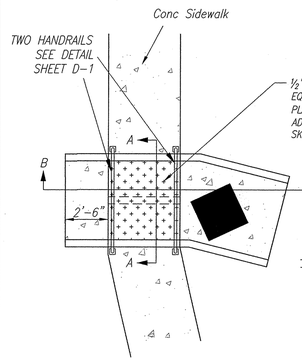
CURB RAMP AND EXISTING SIDEWALK

NOTES:
1. CONSTRUCT THE RAMP SURFACE TO BE STABLE, FIRM, AND SLIP RESISTANT. CONSTRUCT THE CURB RAMP TYPE AS SHOWN IN THE PAVEMENT MARKING PLANS OR AS DIRECTED BY THE ENGINEER.
2. LOCATE CURB RAMPS AND PLACE PEDESTRIAN CROSSWALK MARKINGS AS SHOWN IN THE PAVEMENT MARKING PLANS. WHEN FIELD ADJUSTMENTS REQUIRE MOVING CURB RAMPS OR MARKINGS AS SHOWN, CONTACT THE SIGNING AND DELINEATION UNIT OR LOCATE AS DIRECTED BY THE ENGINEER.
3. COORDINATE THE CURB RAMP AND THE PEDESTRIAN CROSSWALK MARKINGS SO A 4'x4' CLEAR SPACE AT THE BASE OF THE CURB RAMP WILL FALL WITHIN THE PEDESTRIAN CROSSWALK LINES.
4. SET BACK DISTANCE FROM INSIDE CROSSWALK MARKING TO NEAREST EDGE OF TRAVEL LANE IS 4' MINIMUM.
5. REFER TO THE PAVEMENT MARKING PLANS FOR STOP BAR LOCATIONS AT SIGNALIZED INTERSECTIONS. IF A PAVEMENT MARKING PLAN IS NOT PROVIDED, CONTACT THE SIGNAL DESIGN SECTION FOR THE STOP BAR LOCATIONS OR LOCATE AS DIRECTED BY THE ENGINEER.
6. TERMINATE PARKING A MINIMUM OF 20' BACK OF A PEDESTRIAN CROSSWALK.
7. CONSTRUCT CURB RAMPS A MINIMUM OF 4' WIDE.
8. CONSTRUCT THE RUNNING SLOPE OF THE RAMP 8.33% MAXIMUM.
9. ALLOWABLE CROSS SLOPE ON SIDEWALKS AND CURB RAMPS WILL BE 2% MAXIMUM.
10. CONSTRUCT THE SIDE FLARE SLOPE A MAXIMUM OF 10% MEASURED ALONG THE CURB LINE.
11. CONSTRUCT THE COUNTER SLOPE OF THE GUTTER OR STREET AT THE BASE OF THE CURB RAMP A MAXIMUM OF 5% AND MAINTAIN A SMOOTH TRANSITION.
12. CONSTRUCT LANDINGS FOR SIDEWALK A MINIMUM OF 4'x4' WITH A MAXIMUM SLOPE OF 2% IN ANY DIRECTION. CONSTRUCT LANDINGS FOR MEDIAN ISLANDS A MINIMUM OF 5'x5' WITH A MAXIMUM SLOPE OF 2% IN ANY DIRECTION.
13. TO USE A MEDIAN ISLAND AS A PEDESTRIAN REFUGE AREA, MEDIAN ISLANDS WILL BE A MINIMUM OF 6' WIDE. CONSTRUCT MEDIAN ISLANDS TO PROVIDE PASSAGE OVER OR THROUGHT THE ISLAND.
14. SMALL CHANNELIZATION ISLANDS THAT CAN NOT PROVIDE A 5'X5' LANDING AT THE TOP OF A RAMPS, WILL BE CUT THROUGH LEVEL WITH THE SURFACE STREET.
15. CURB RAMPS WITH RETURNED CURBS MAY BE USED ONLY WHERE PEDESTRIANS WOULD NOT NORMALLY WALK ACROSS THE RAMP. THE ADJACENT SURFACE IS PLANTING OR OTHER NON-WALKING SURFACE OR THE SIDE APPROACH IS SUBSTANTIALLY OBSTRUCTED.
16. PLACE A ½" EXPANSION JOINT WHERE THE CONCRETE CURB RAMP JOINS THE CURB AS SHOWN IN ROADWAY STANDARD DRAWING 848.01
17. PLACE ALL PEDESTRIAN PUSH BUTTON ACTUATORS AND CROSSING SIGNALS AS SHOWN IN THE PLANS OR AS SHOWN IN THE MUTCD.
18. CURB RAMPS THROUGH MEDIAN ISLANDS, SINGLE RAMPS AT DUAL CROSSWALKS OR LIMITED R/W SITUATIONS, WILL BE HANDLED BY SPECIAL DETAILS. CONTACT THE CONTRACT STANDARDS AND DEVELOPMENT UNIT FOR THE DETAILS OR FOR A SPECIAL DESIGN.

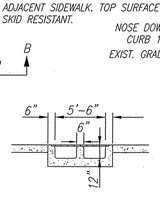
ENGLISH STANDARD DRAWING FOR **CURB RAMP** EXISTING CURB AND GUTTER

SHEET 5 OF 5
848.06

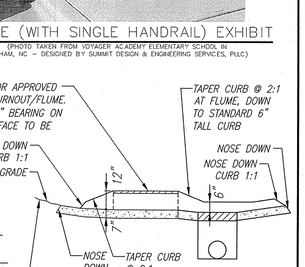
FLUME (WITH SINGLE HANDRAIL) EXHIBIT
(PHOTO TAKEN FROM VOYAGER ACADEMY ELEMENTARY SCHOOL IN DURHAM, NC - DESIGNED BY SUMMIT DESIGN & ENGINEERING SERVICES, PLLC)



PLAN



SECTION A-A



SECTION B-B

CONCRETE FLUME AT SIDEWALK

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	REVISIONS				DATE	BY

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PROJECT ENGINEER/ARCHITECT
CEA
PROJECT MANAGER
CEA

DRAWN BY
KSW
SCALE

NORTH CAROLINA PROFESSIONAL SEAL 030018 ENGINEER FREDRIC T. ROYAL 7/3/14

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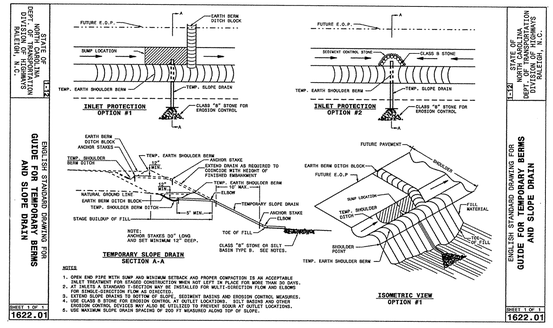
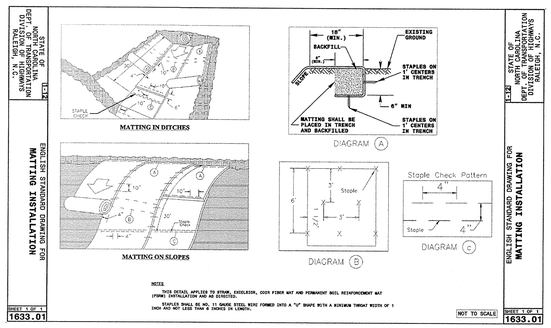
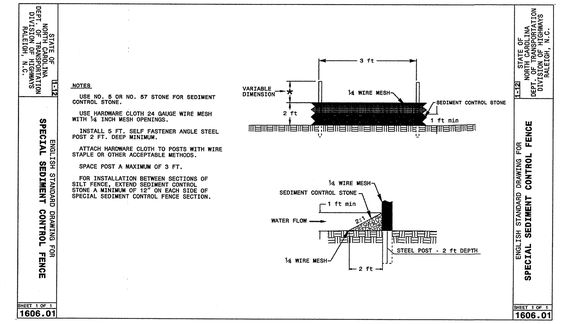
CONSTRUCTION DRAWINGS
US 64 SIDEWALK EXTENSION
PITTSBORO, NC

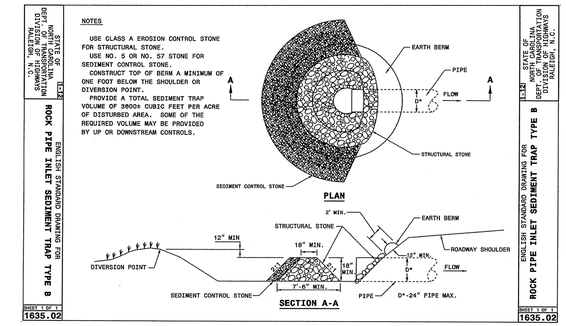
DETAILS

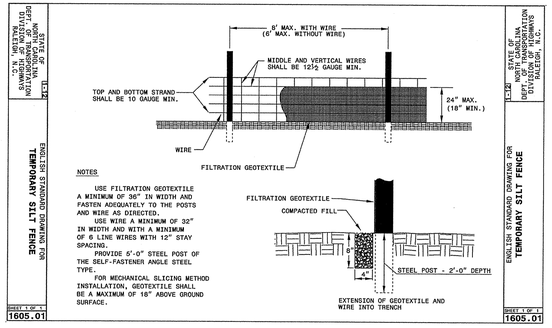
PROJECT NO.
13-0258
DRAWING NAME:
13-0258_D-1
SHEET NO.
D-2

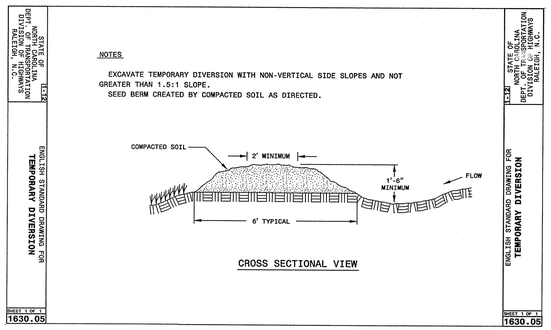


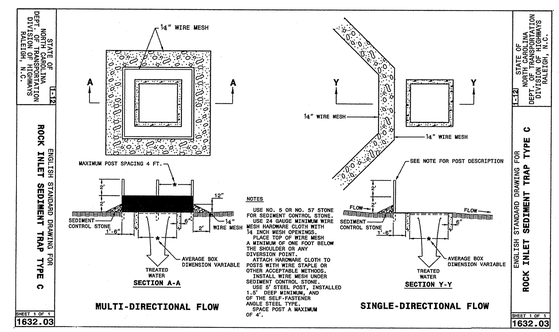


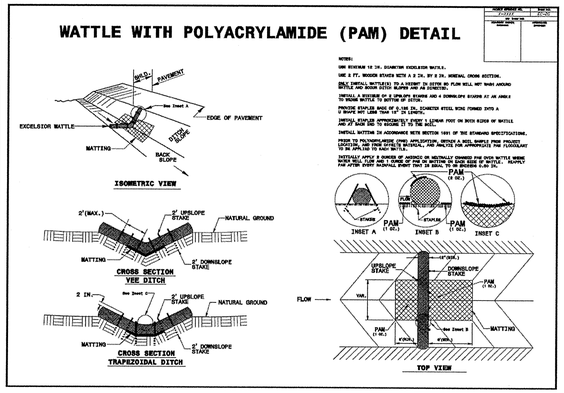


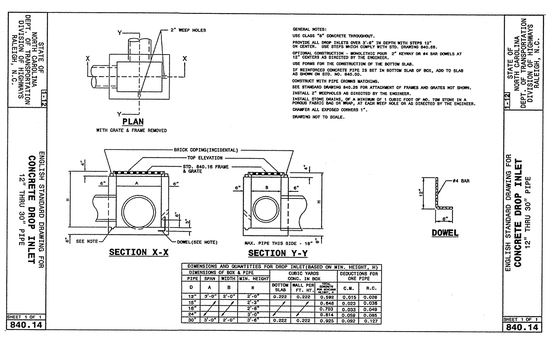


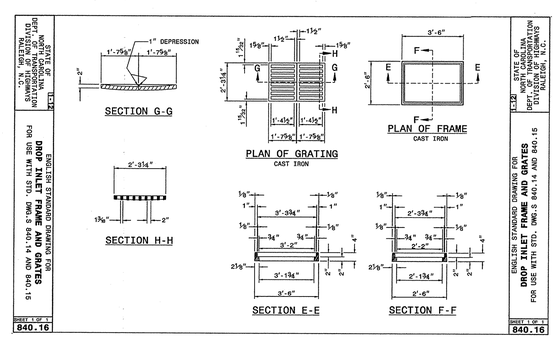


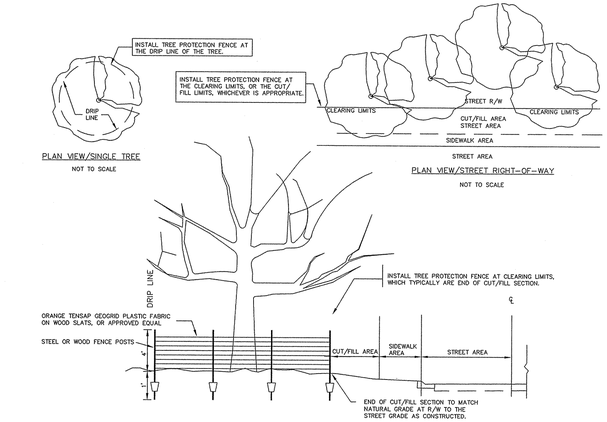


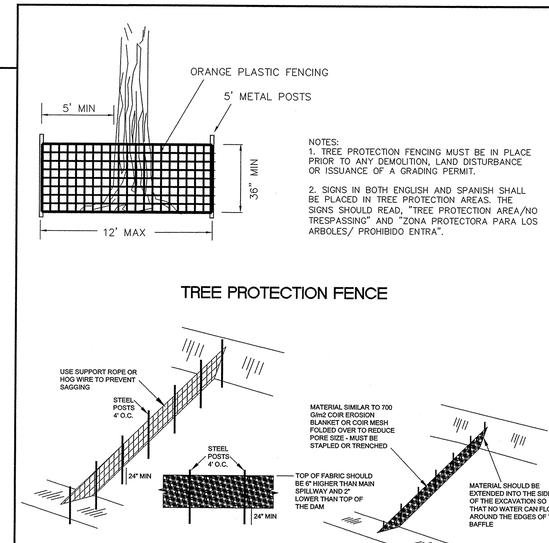












NOTES:
1. TREE PROTECTION FENCING MUST BE IN PLACE PRIOR TO ANY DEMOLITION, LAND DISTURBANCE OR ISSUANCE OF A GRADING PERMIT.
2. SIGNS IN BOTH ENGLISH AND SPANISH SHALL BE PLACED IN TREE PROTECTION AREAS. THE SIGNS SHOULD READ, "TREE PROTECTION AREA/NO TRESPASSING" AND "ZONA PROTECTORA PARA LOS ARBOLES/ PROHIBIDO ENTRA".

Stabilization Requirements:

1-4-0120-2
Stabilization for this project shall comply with the time frame guidelines as specified by the NCG-010000 general construction permit effective August 3, 2011 issued by the North Carolina Department of Environment and Natural Resources Division of Water Quality. Temporary or permanent ground cover stabilization shall occur within 7 calendar days from the last land-disturbing activity, with the following exceptions in which temporary or permanent ground cover shall be provided in 14 calendar days from the last land-disturbing activity:

- Slopes between 2:1 and 3:1, with a slope length of 10 ft. or less
- Slopes 3:1 or flatter, with a slope of length of 50 ft. or less
- Slopes 4:1 or flatter

The stabilization timeframe for High Quality Water (HQW) Zones shall be 7 calendar days with no exceptions for slope grades or lengths. High Quality Water Zones (HQW) Zones are defined by North Carolina Administrative Code 15A NCAC 04A.0105 (25). Temporary and permanent ground cover stabilization shall be achieved in accordance with the provisions in this contract and as directed.

SEEDING AND MULCHING:(East Crimp)
The kinds of seed and fertilizer, and the rates of application of seed, fertilizer, and limestone, shall be as stated below. During periods of overlapping dates, the kind of seed to be used shall be determined. All rates are in pounds per acre.

All Roadway Areas

March 1 - August 31September 1 - February 2850#Tall Fescue50#Tall Fescue10#Centipede10#Centipede25#Bermudagrass (hulled)35#Bermudagrass (unhulled)500#Fertilizer500#Fertilizer4000# Limestone4000# Limestone

Waste and Borrow Locations

March 1 - August 31September 1 - February 2875# Tall Fescue75# Tall Fescue25# Bermudagrass (hulled)35#Bermudagrass (unhulled)500#Fertilizer500#Fertilizer4000# Limestone4000#Limestone
Note: 50# of Bahiagrass may be substituted for either Centipede or Bermudagrass only upon Engineer's request.

Approved Tall Fescue Cultivars

2nd MillenniumDusterMagellanRenditionAvengerEndeavorMasterpieceScorpionBarleexasEscaladeMatadorShelbyBarlexas HFalcon II, III, IV & VMatador GTSigniaBarreraFidelityMillenniumSilverstarBarringtonFinesse HMontaukSouthern Choice HBiltmoreFirebirdMustang 3StettsonBingoFocusOlympic GoldTarheelBravoGrande HPadreTitan LtdCayenneGreenkeeperParaisoTitaniumChapel
HillGreystonePicassoTomahawkChesapeakeInfernoPiedmontTacerConstitutionJusticePure GoldTrooperChipperJaguar 3ProspectTurboCoronadoKalahariQuestUltimateCoyote&Kentucky 31Rebel ExcedaWatchdogDavinciKitty HawkRebel SentryWolfpackDynastyKitty Hawk 2000Regiment HDominionLexingtonRembrandt
On cut and fill slopes 2:1 or steeper Centipede shall be applied at the rate of 5 pounds per acre and add 20# of Sericea Lespedeza from January 1 - December 31.

Fertilizer shall be 10-20-20 analysis. A different analysis of fertilizer may be used provided the 1-2-2 ratio is maintained and the rate of application adjusted to provide the same amount of plant food as a 10-20-20 analysis and as directed.

All areas seeded and mulched shall be tacked with asphalt. Crimping of straw in lieu of asphalt tack shall not be allowed on this project.

CRIMPING STRAW MULCH:

Crimping shall be required on this project adjacent to any section of roadway where traffic is to be maintained or allowed during construction. In areas within six feet of the edge of pavement, straw is to be applied and then crimped. After the crimping operation is complete, an additional application of straw shall be applied and immediately tacked with a sufficient amount of undiluted emulsified asphalt.

Straw mulch shall be of sufficient length and quality to withstand the crimping operation.

Crimping equipment including power source shall be subject to the approval of the Engineer providing that maximum spacing of crimper blades shall not exceed 8".

NUTRIENT MANAGEMENT TRAINING REQUIREMENTS:

The person(s) responsible for applying fertilizer or person(s) conducting the application of fertilizer on this project within the Jordan Lake or Falls Lake Watershed shall complete the following web-based training prior to performing this work:

http://portal.ncdenr.org/web/jordanlake/fertilizer-management

The cost of the training is $10.00 and the training shall be paid for and completed at the expense of the Contractor and no direct payment will be made in this contract. A certificate of completion must be presented by the person(s) responsible for fertilizer application or person(s) conducting the application of fertilizer prior to performing fertilizer application on the project within the limits of the Jordan Lake or Falls Lake Watershed.

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	REVISIONS	DATE	BY

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PROJECT ENGINEER/ARCHITECT
CEA
PROJECT MANAGER
CEA

DRAWN BY
KSW
SCALE

NORTH CAROLINA PROFESSIONAL SEAL 030018 ENGINEER FREDRIC T. ROYAL
7/3/14

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CONSTRUCTION DRAWINGS
US 64 SIDEWALK EXTENSION
PITTSBORO, NC

EROSION CONTROL DETAILS

PROJECT NO.
13-0258
DRAWING NAME:
13-0258_D-1
SHEET NO.
D-3