P26-34

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Right of Way Data Sheets	R-1 - R-19
Utility Plans	UBO-1 - UBO-19
Erosion Control Plans	EC-1 - EC-21
Traffic Control Plans	TCP-1 - TCP-3
Cross Sections	X-0 - X-119
Total Sheet Count	210

CHARLOTTE.
ENGINEERING & PROPERTY MANAGEMENT

Construction Plans of Proposed

HOPE VALLEY / OAK FOREST NEIGHBORHOOD IMPROVEMENT PROJECT
Project No. 512-08-054

Project Features:

Grading, Drainage, Concrete Curb & Gutter, Sidewalk, Erosion Control, Traffic Control

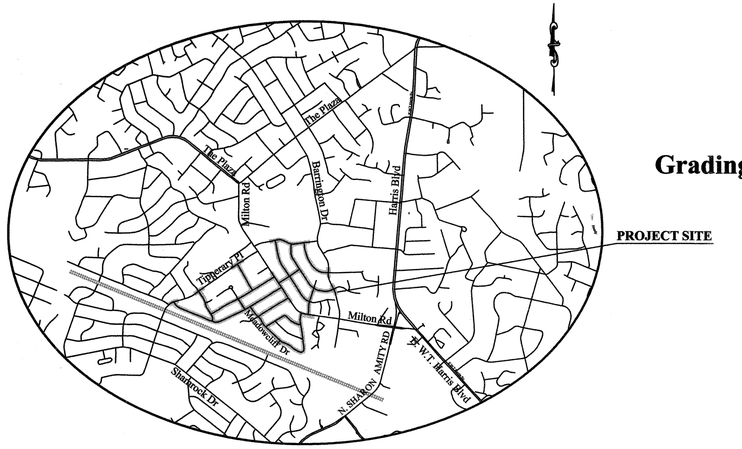
PE SEAL

ROADWAY	HYDRAULICS	TRAFFIC CONTROL
NORTH CAROLINA PROFESSIONAL SEAL 28235 ENGINEER VIRGINIA T. SCHARF 3/31/14	NORTH CAROLINA PROFESSIONAL SEAL 37830 ENGINEER MICHAEL P. BAREFOOT 3/31/14	NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER TODD BROOKS 3/31/14

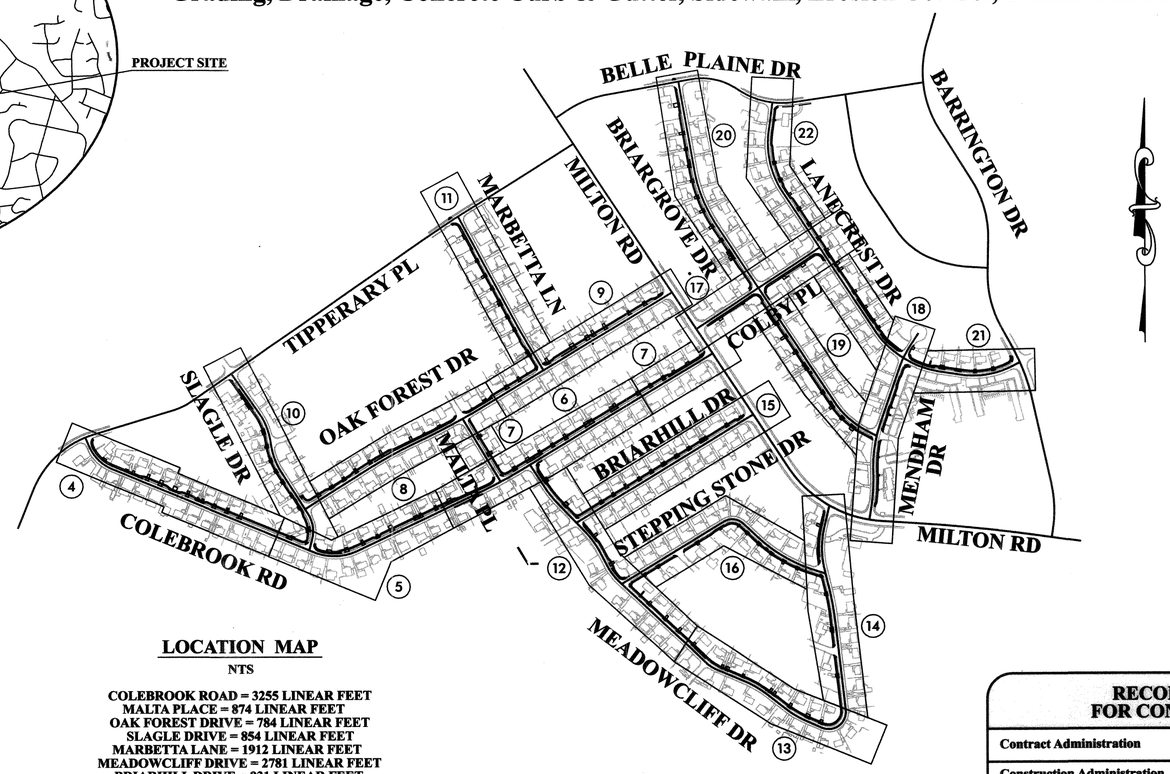
RECORD DRAWINGS

CONVENTIONAL SIGNS

Proposed Property Line
Existing Property Line
Maintained as Apparent R/W Line
Existing Structures
Railroad Tracks
Proposed Edge of Pavement
Fence
Slope Stake Line
Temporary Construction Easement
Sidewalk/Utility Easement
Storm Drainage Easement
Permanent Slope Easement
Existing Gas Line
Existing Water Line
Existing Sanitary Sewer
Existing Underground Telecommunications
Existing Underground Electric
Existing Storm Drainage
Proposed Storm Drainage
Existing Tree
Existing Water Meter
Existing Water Valve
Existing Gas Valve
Existing Sanitary Sewer Manhole
Proposed Sanitary Sewer Manhole
Existing Storm Drain Manhole
Proposed Storm Drain Manhole
Existing Telephone Manhole
Proposed Telephone Manhole
Existing Electric Manhole
Proposed Electric Manhole
Existing Catch Basin
Proposed Catch Basin
Existing Light Pole
Proposed Light Pole
Existing Utility Pole
Guy Wire
Proposed Utility Pole
Iron Pin
Existing Fire Hydrant
Proposed Fire Hydrant
Existing Drop Inlet
Proposed Drop Inlet
Accessible Ramp
Tree Protection
Proposed Guardrail
Silt Fence
Proposed Curb & Gutter, Conc. Drive, Sidewalk
Proposed Asphalt Pavement
Proposed Rip Rap Ditch
Proposed Gravel
Proposed Pavement Removal
Proposed Sidewalk Bridging Tree Roots
Proposed Asphalt Patch



VICINITY MAP
NTS



LOCATION MAP
NTS

COLEBROOK ROAD = 3255 LINEAR FEET
MALTA PLACE = 874 LINEAR FEET
OAK FOREST DRIVE = 784 LINEAR FEET
SLAGLE DRIVE = 854 LINEAR FEET
MARBETTA LANE = 1912 LINEAR FEET
MEADOWCLIFF DRIVE = 2781 LINEAR FEET
BRIARHILL DRIVE = 931 LINEAR FEET
STEPPING STONE DRIVE = 998 LINEAR FEET
COLBY PLACE = 628 LINEAR FEET
MENDHAM DRIVE = 662 LINEAR FEET
BRIARGROVE DRIVE = 1918 LINEAR FEET
LANECREST DRIVE = 1876 LINEAR FEET
TOTAL LENGTH OF SIDEWALK = 17473 LINEAR FEET
3.31 MILES

RECOMMENDED FOR CONSTRUCTION

Contract Administration	25 MARCH 2014
Construction Administration	1/10/14
Landscape Management	11/6/2013
Engineering Services	Cary Chesshir 1-22-14
Utility Coordinator	Kristie Kennedy 1/9/14
CDOT- Design	1-21-14
CDOT - Implementation	1-21-14
CMU	Cary Chesshir for Fred Heath 1-22-14
Planning Commission	—
Storm Water Services	2-19-14

PLANS PREPARED BY:

ATKINS
5200 77 CENTER DRIVE, SUITE 500
CHARLOTTE, NORTH CAROLINA 28217
PHONE: (704) 522-7275
FAX: (704) 525-2838
NCBELS F-0326

The project shall be constructed in accordance with North Carolina Department of Transportation Standard Specifications for Roads and Structures dated July 2012, Work Area Traffic Control Handbook dated 2006, and as amended by the contract provisions and these plans.

2012 STANDARD SPECIFICATIONS

GRAPHIC SCALES

Plan View: 20 40 60
Horz. Profile: 20 40 60
Vert. Profile: 4 8 12
Cross Section: 5 10 15

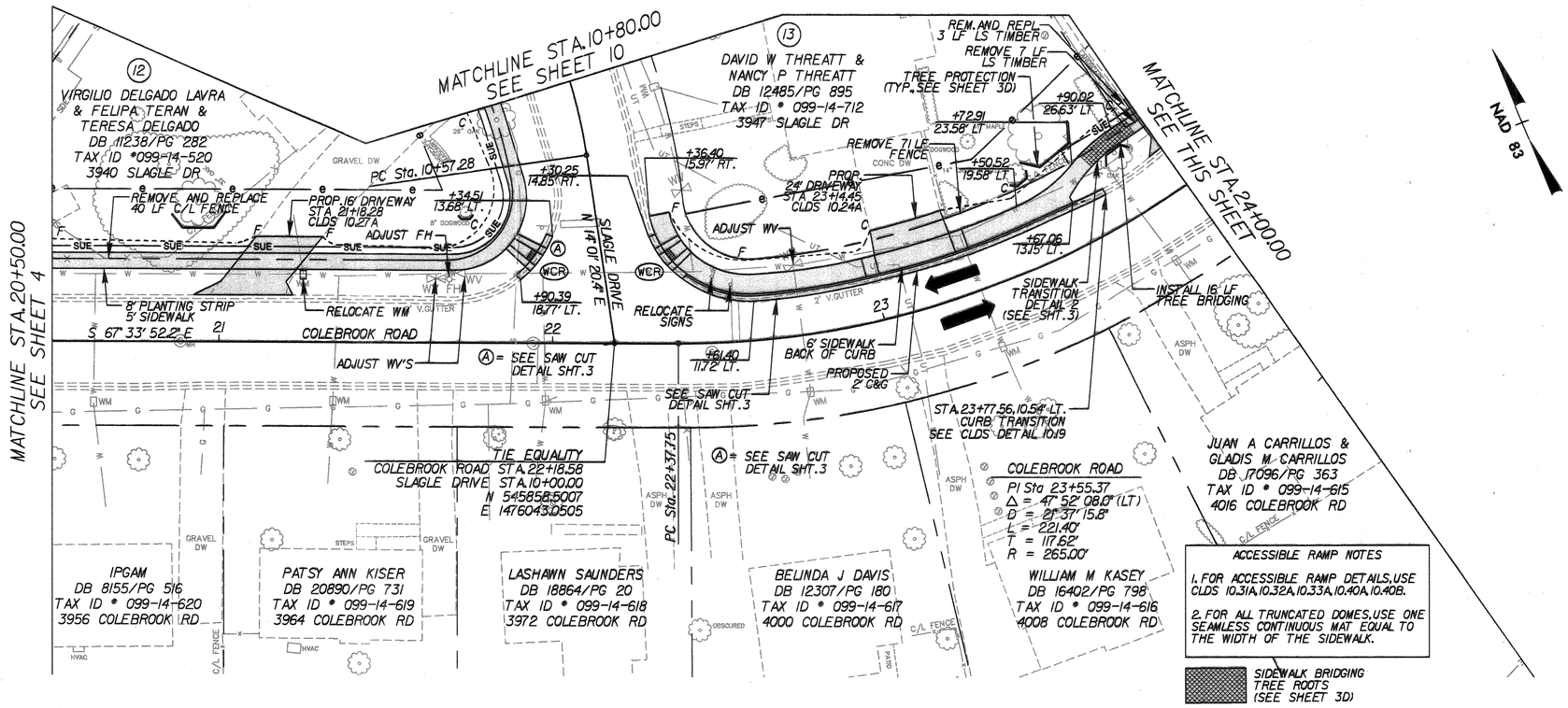
CHARLOTTE.
ENGINEERING & PROPERTY MANAGEMENT

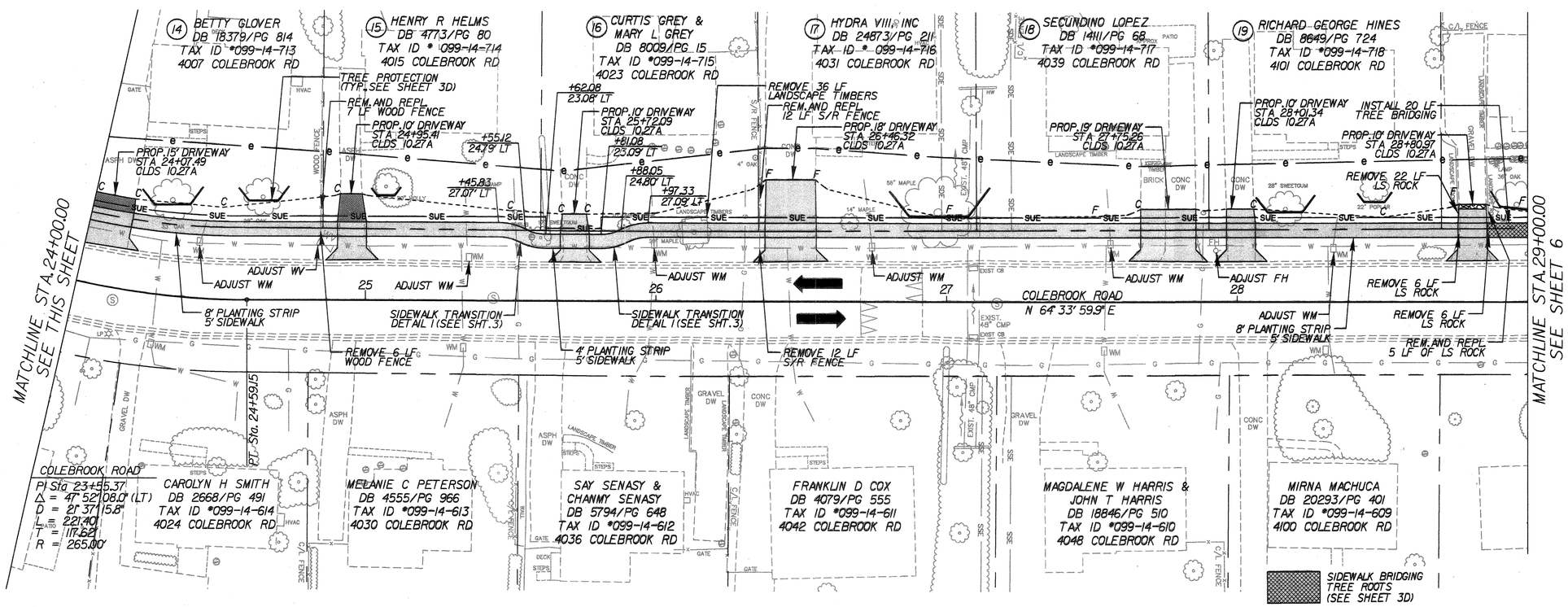
Bid Set No. _____

APPROVED David G. Meacham 3/25/14
CITY ENGINEER DATE

Project Name: HOPE VALLEY / OAK FOREST NEIGHBORHOOD IMPROVEMENT PROJECT

Project Number: 512-08-054





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Plans Prepared By:

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PHONE: (704) 522-7275
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 28235 ENGINEER VIRGINIA T. SCHIAR 03/31/14

NORTH CAROLINA PROFESSIONAL SEAL 037830 ENGINEER MICHAEL P. BAREFOOT 03/31/14

1"=20'	SCALE
DWG	CHECKED BY
MARCH 2014	DATE
ABR	PREPARED BY
VTS	APPROVED BY

S12-08-054 JOB NO.

26-MAR-2014 15:02
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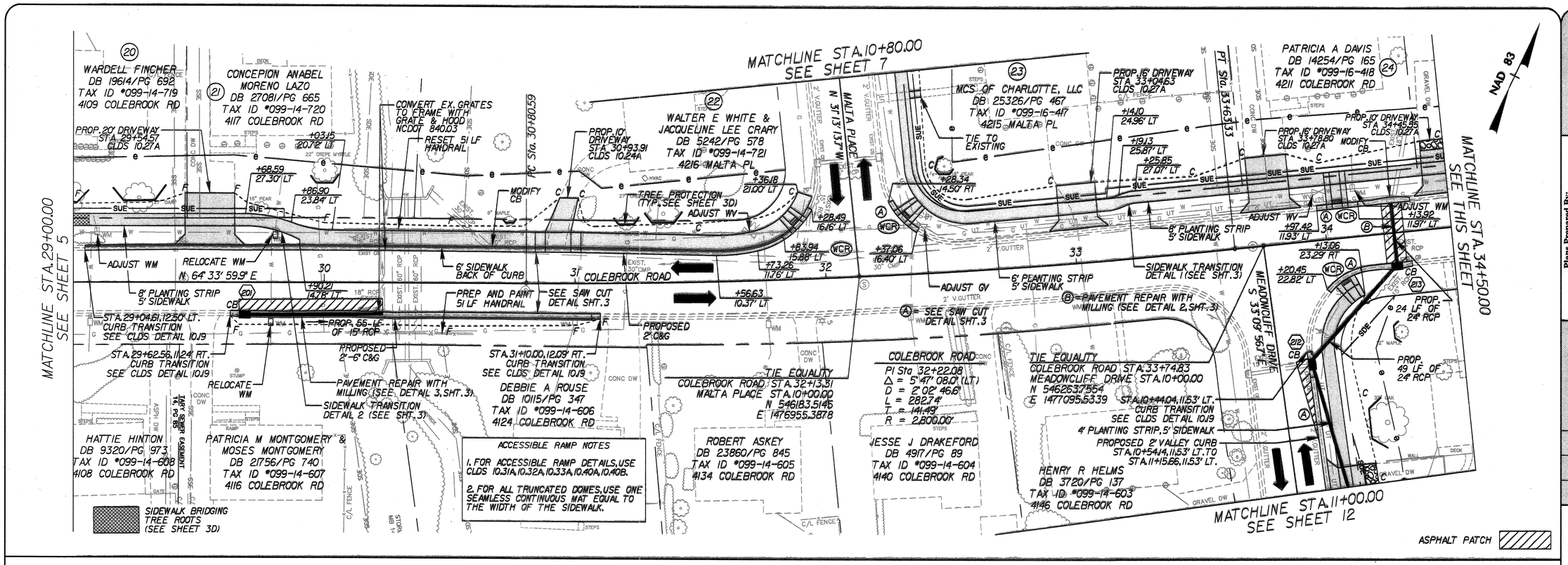
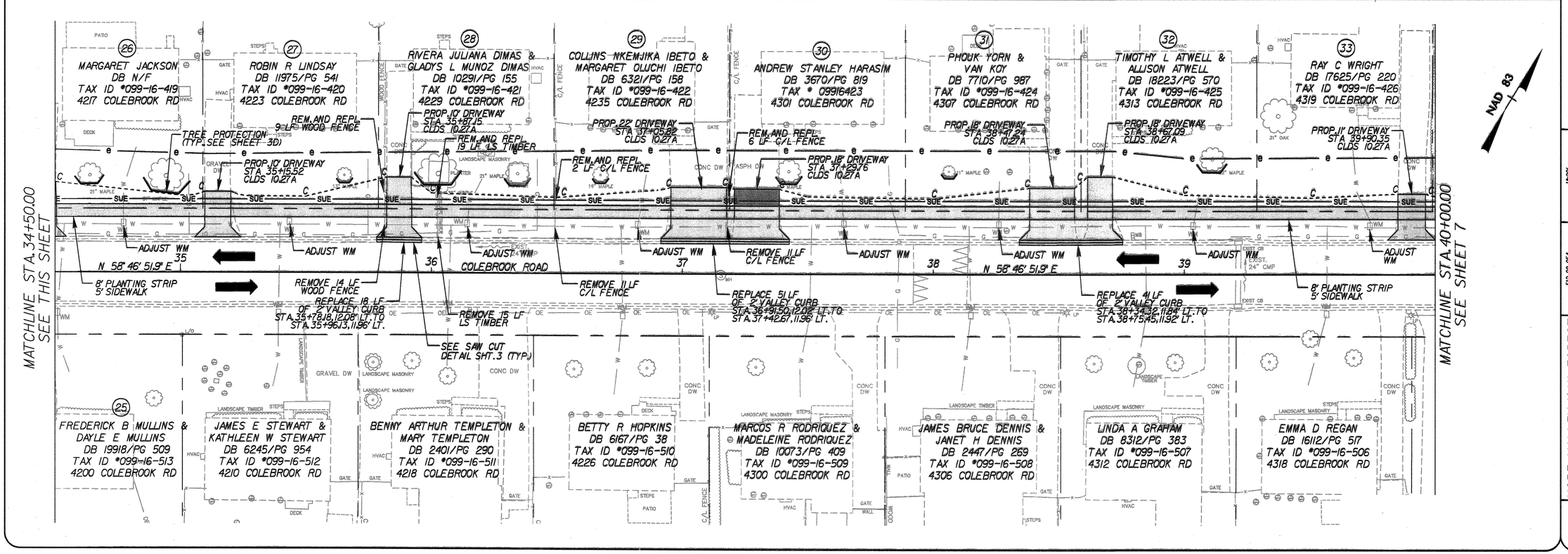
CAD FILE PATH

HOPE VALLEY/OAK FOREST NEIGHBORHOOD IMPROVEMENT PROJECT

COLEBROOK ROAD STA. 20+50.00 TO 29+00.00

SHEET 5 OF 23





Plans Prepared By:

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NCBELS #F-0326

CHARLOTTE

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 28295 ENGINEER VIRGINIA T. SCHNAR 3/31/14

NORTH CAROLINA PROFESSIONAL SEAL 032838 ENGINEER MICHAEL P. BAKEHOUSE 3/31/14

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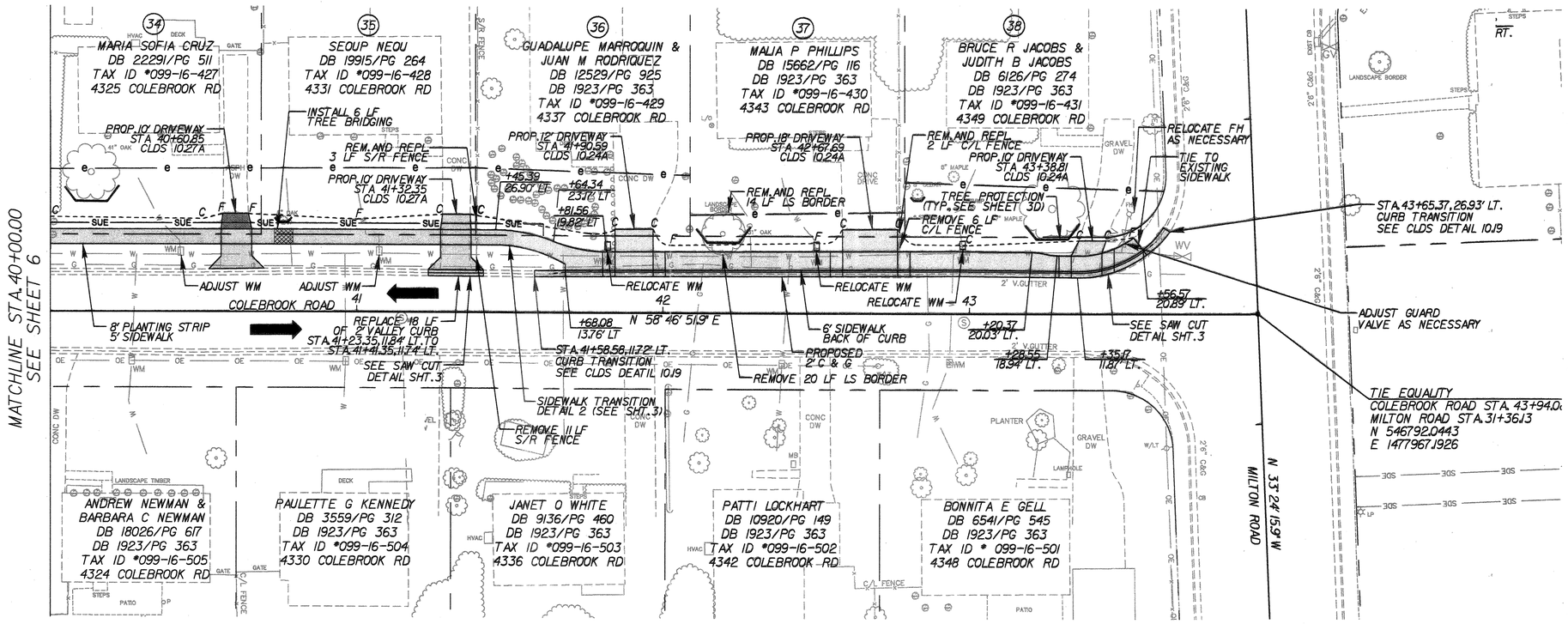
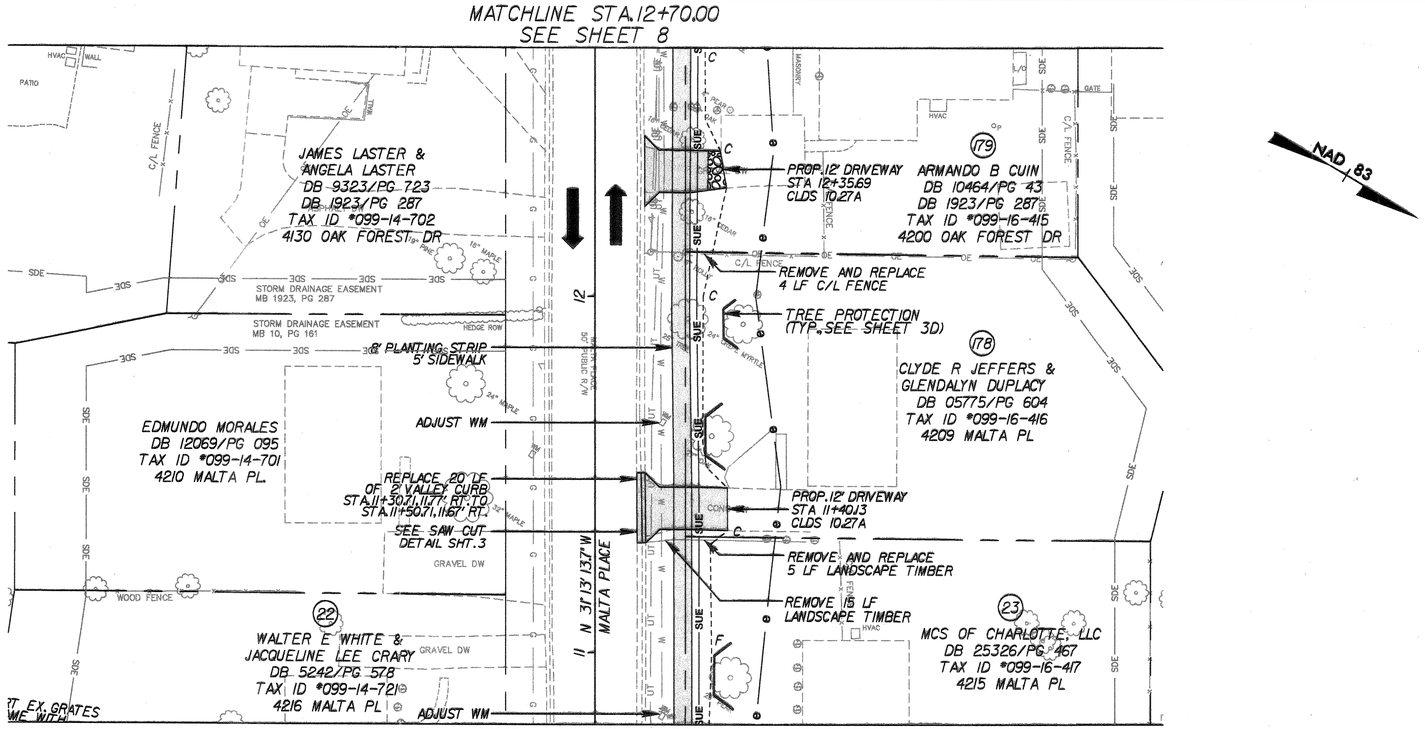
DWG	CHECKED BY
MARCH 2014	DATE
ABR	PREPARED BY
VYS	APPROVED BY

HOPE VALLEY/OAK FOREST NEIGHBORHOOD IMPROVEMENT PROJECT

COLEBROOK ROAD STA. 29+00.00 TO 40+00.00

SHEET 6 OF 23





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PHONE: (704) 522-7275
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 28235 ENGINEER VIRGINIA T. SCHIAN 3/31/14

NORTH CAROLINA PROFESSIONAL SEAL 037880 ENGINEER MICHAEL P. BARRETT 3/31/14

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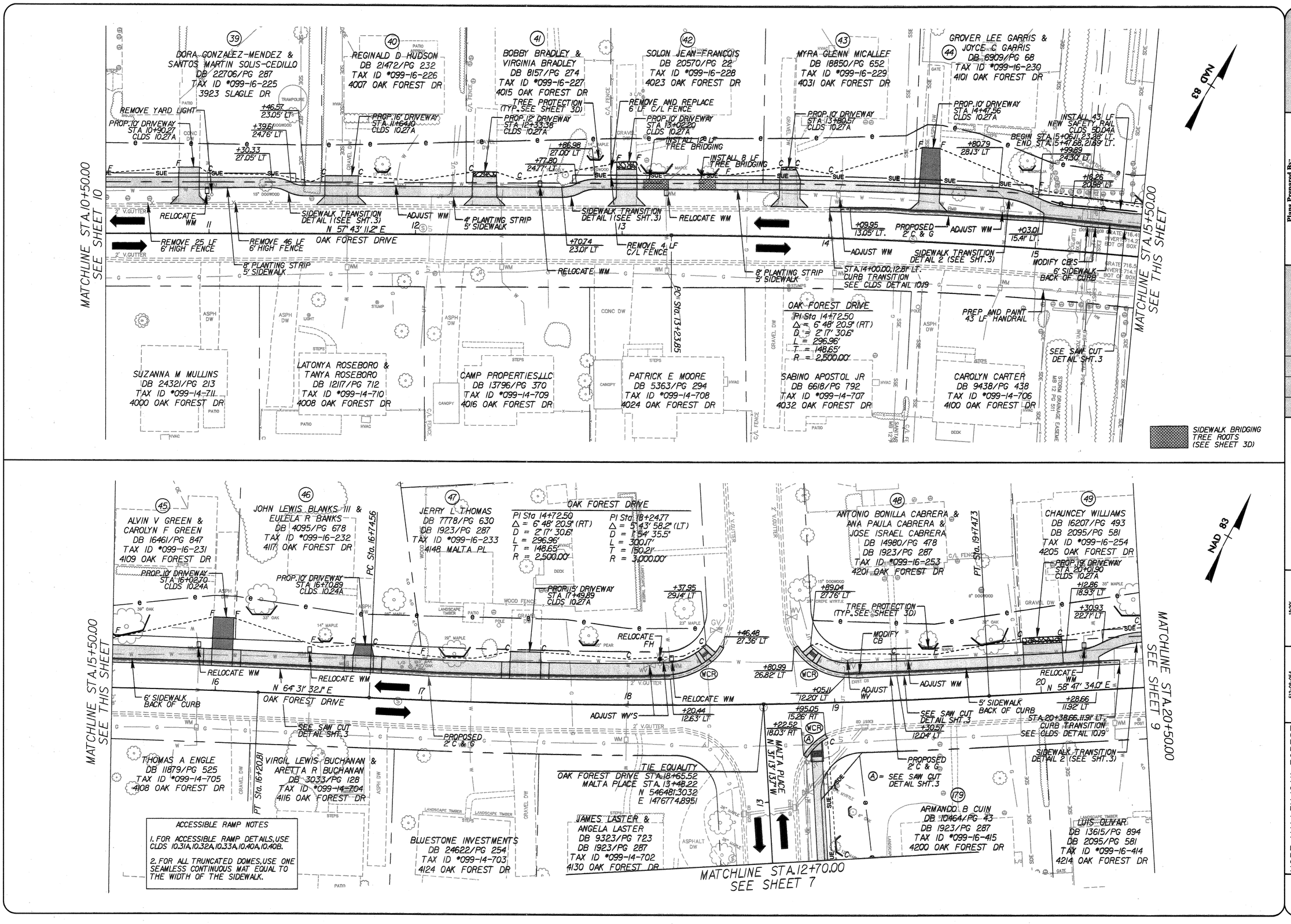
DWB CHECKED BY	ABR PREPARED BY
MARCH 2014 DATE	VTS APPROVED BY

HOPE VALLEY/OAK FOREST NEIGHBORHOOD IMPROVEMENT PROJECT

COLEBROOK ROAD STA. 40+00.00 TO 43+94.08 MALTA PLACE STA. 10+80.00 TO 12+70.00

SHEET 7 OF 23



CHARLOTTE.

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PHONE: (704) 522-7275
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 28235 ENGINEER VIRGINIA T. SCHAAR 3/31/14

NORTH CAROLINA PROFESSIONAL SEAL 37888 ENGINEER MICHAEL P. BAREFOOT 03/31/14

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MARCH 2014	DATE
512-08-054	JOB NO.
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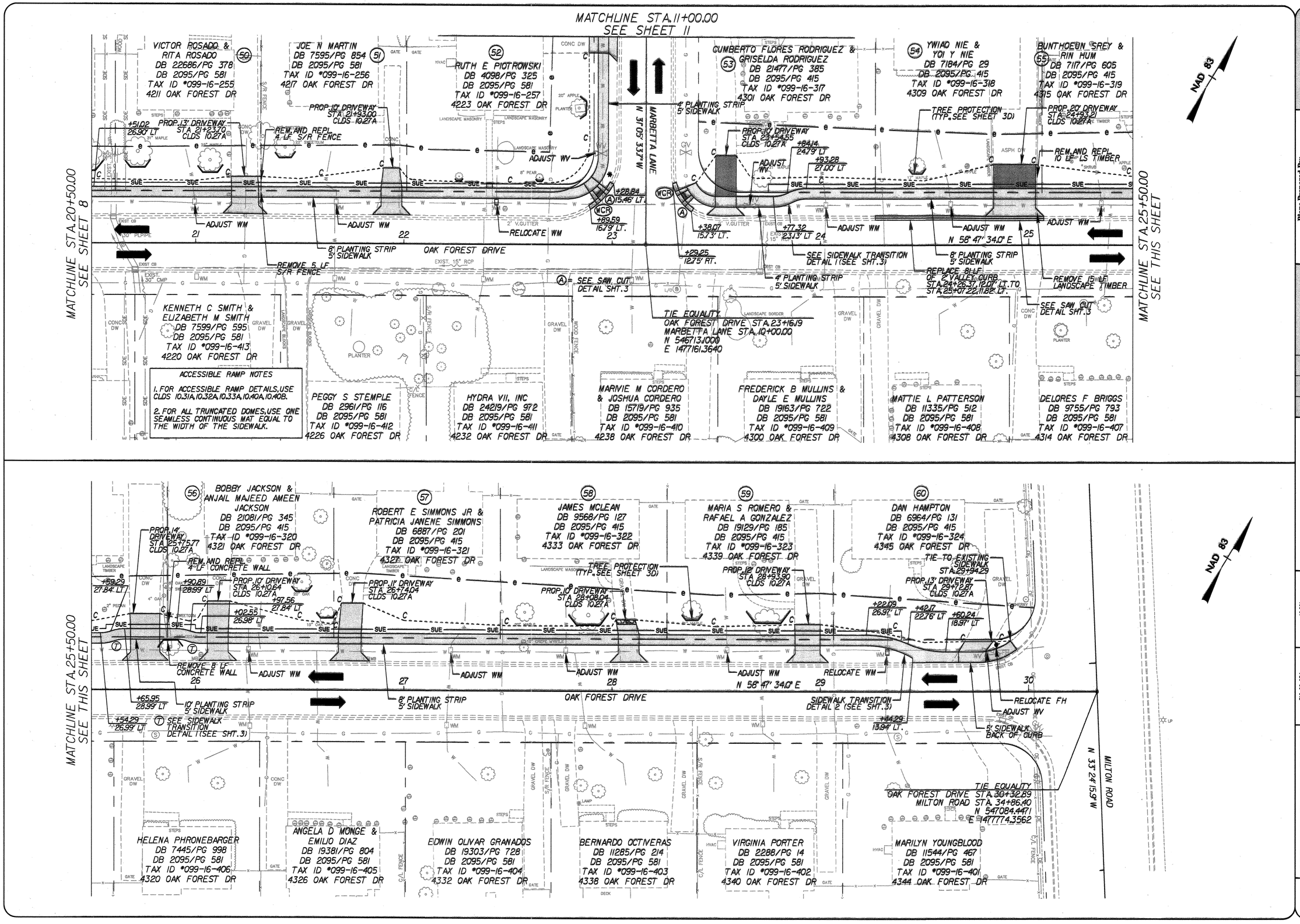
ABR	PREPARED BY
VYS	APPROVED BY

HOPE VALLEY/OAK FOREST NEIGHBORHOOD IMPROVEMENT PROJECT

OAK FOREST DRIVE STA.10+50.00 TO 20+50.00

SHEET 8 OF 23



CHARLOTTE

Plans Prepared By:

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5200 77 CENTER DRIVE, SUITE 500
CHARLOTTE, N.C. 28217
PHONE: (704) 522-7275
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 28235 ENGINEER VIRGINIA T. SCHAR 3/31/14

NORTH CAROLINA PROFESSIONAL SEAL 31839 ENGINEER MICHAEL P. BAREFOOT 03/31/14

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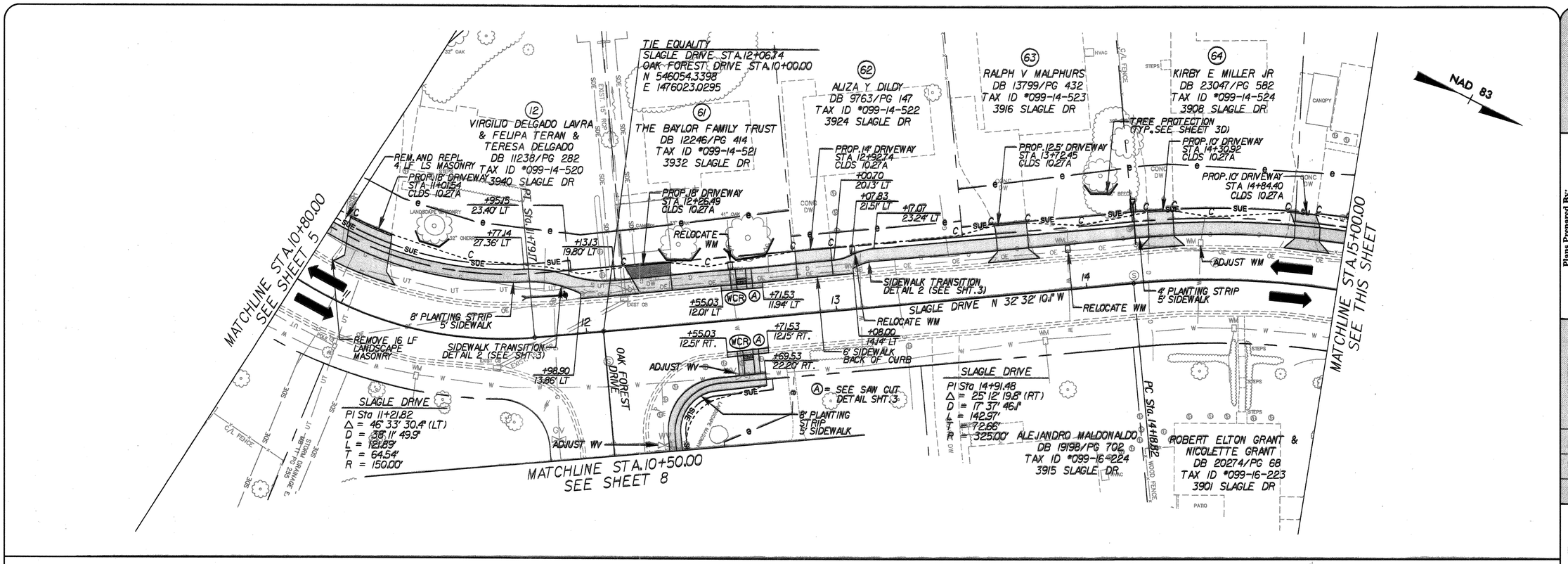
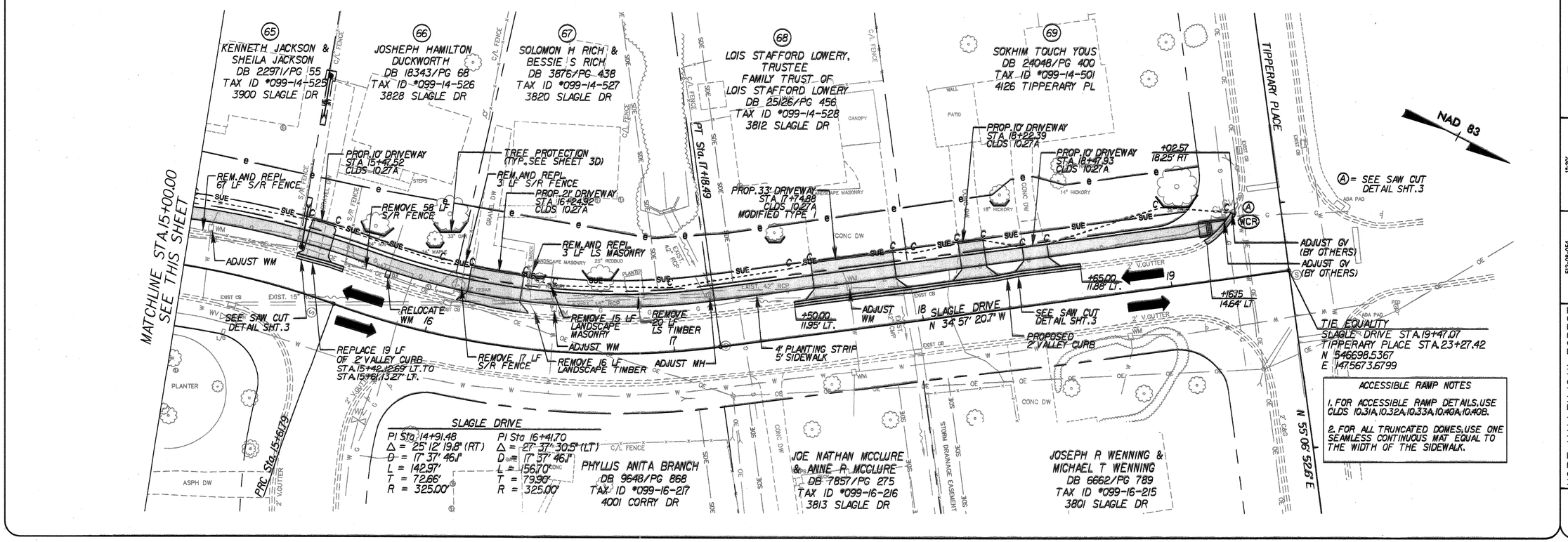
MARCH 2014 DATE	ABR PREPARED BY
	VTS APPROVED BY

HOPE VALLEY/OAK FOREST NEIGHBORHOOD IMPROVEMENT PROJECT

OAK FOREST DRIVE STA. 20+50.00 TO 30+32.89

SHEET 9 OF 23





CHARLOTTE.

Plans Prepared By:

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6200 77 CENTER DRIVE, SUITE 500
CHARLOTTE, N.C. 28217
PHONE: (704) 522-7275
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 28235 ENGINEER VIRGINIA T. SCHARR 03/31/14

NORTH CAROLINA PROFESSIONAL SEAL 37830 ENGINEER MICHAEL P. BARRETT 03/31/14

512-08-054 JOB NO.	1"=20' SCALE
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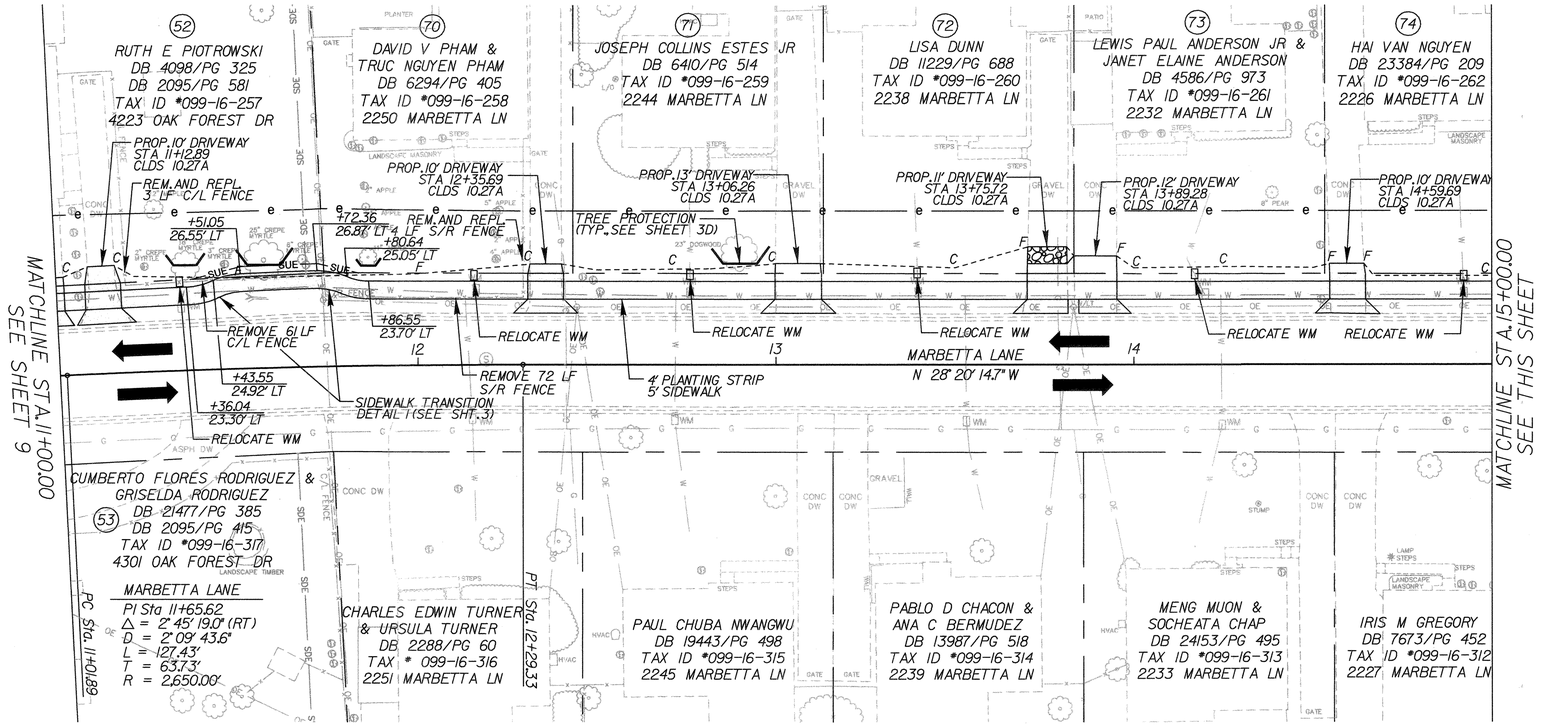
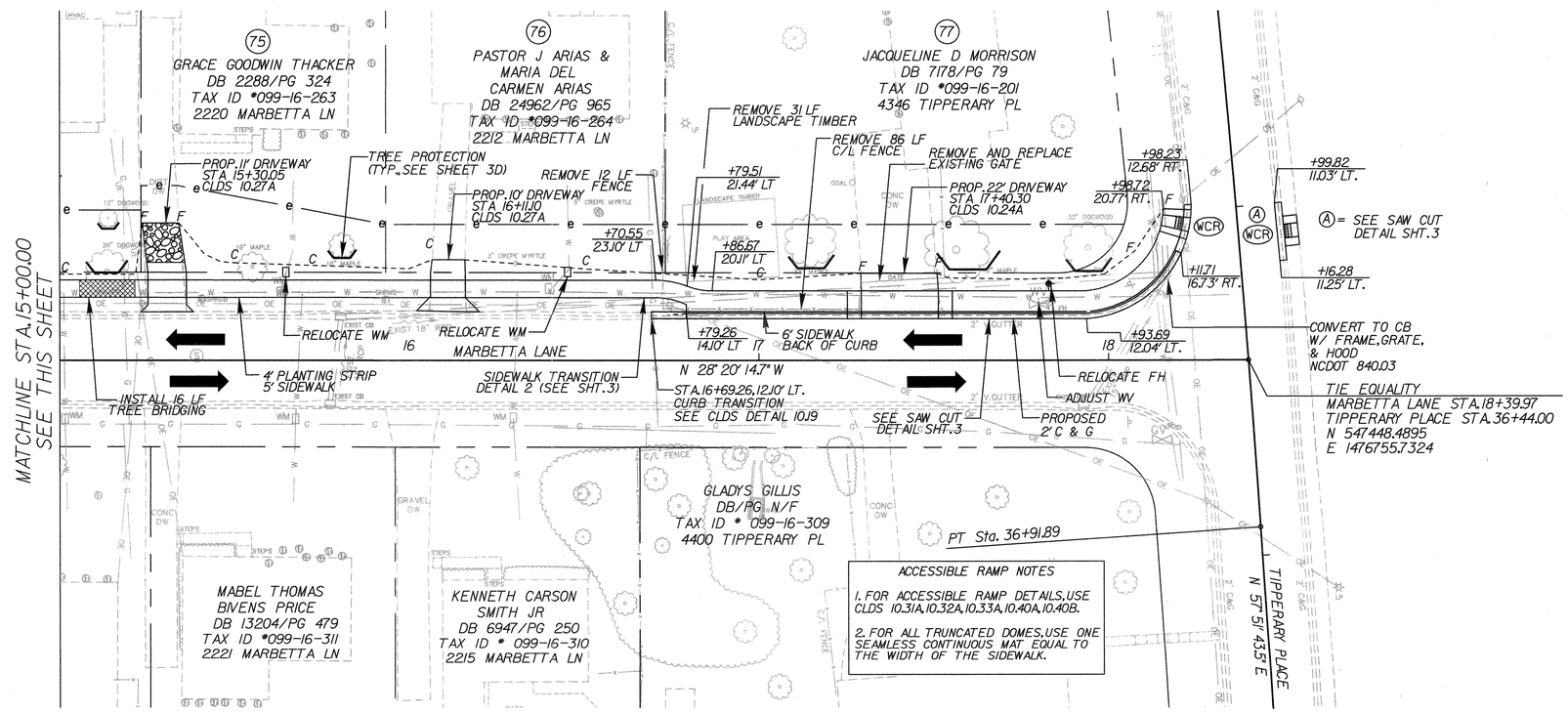
ABR PREPARED BY	MARCH 2014 DATE
VYS APPROVED BY	

HOPE VALLEY/OAK FOREST NEIGHBORHOOD IMPROVEMENT PROJECT

SLAGLE DRIVE STA. 10+80.00 TO 19+47.07

SHEET 10 OF 23





ACCESSIBLE RAMP NOTES

1. FOR ACCESSIBLE RAMP DETAILS, USE CLDS 10.31A, 10.32A, 10.33A, 10.40A, 10.40B.

2. FOR ALL TRUNCATED DOMES, USE ONE SEAMLESS CONTINUOUS MAT EQUAL TO THE WIDTH OF THE SIDEWALK.

CHARLOTTE

Plans Prepared By:

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5200 77 CENTER DRIVE, SUITE 500
CHARLOTTE, N.C. 28277
PHONE: (704) 522-7276
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 28235 ENGINEER VIRGINIA T. SCHIAR 03/31/14

NORTH CAROLINA PROFESSIONAL SEAL 31830 ENGINEER MICHAEL P. BAREFOOT 03/31/14

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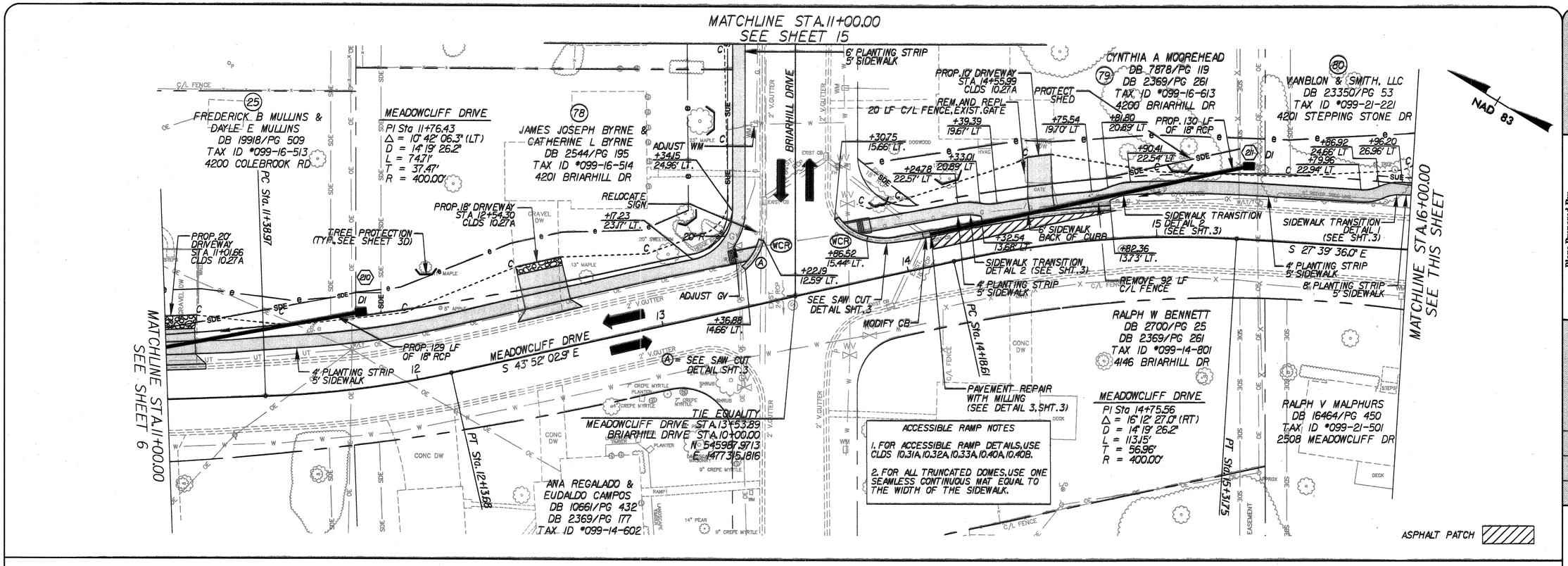
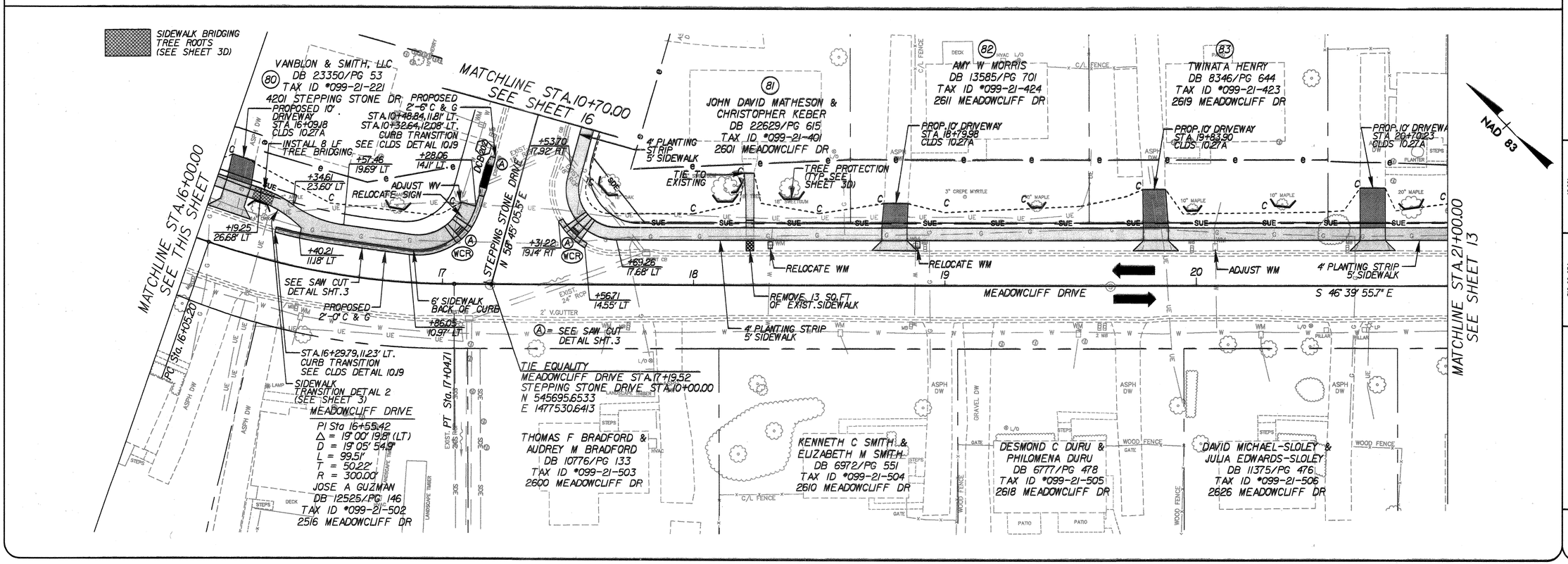
ABR PREPARED BY	VTS APPROVED BY
DWB CHECKED BY	MARCH 2014 DATE

HOPE VALLEY/OAK FOREST NEIGHBORHOOD IMPROVEMENT PROJECT

MARBETTA LANE STA. 11+00.00 TO 18+39.97

SHEET 11 OF 23





Plans Prepared By:

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CHARLOTTE, N.C. 28217
PHONE: (704) 522-7275
NCBELS #F-0326

CHARLOTTE

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 28235 ENGINEER VIRGINIA T. SCHARR 03/31/14

NORTH CAROLINA PROFESSIONAL SEAL 37836 ENGINEER MICHAEL P. BAREFOOT 03/31/14

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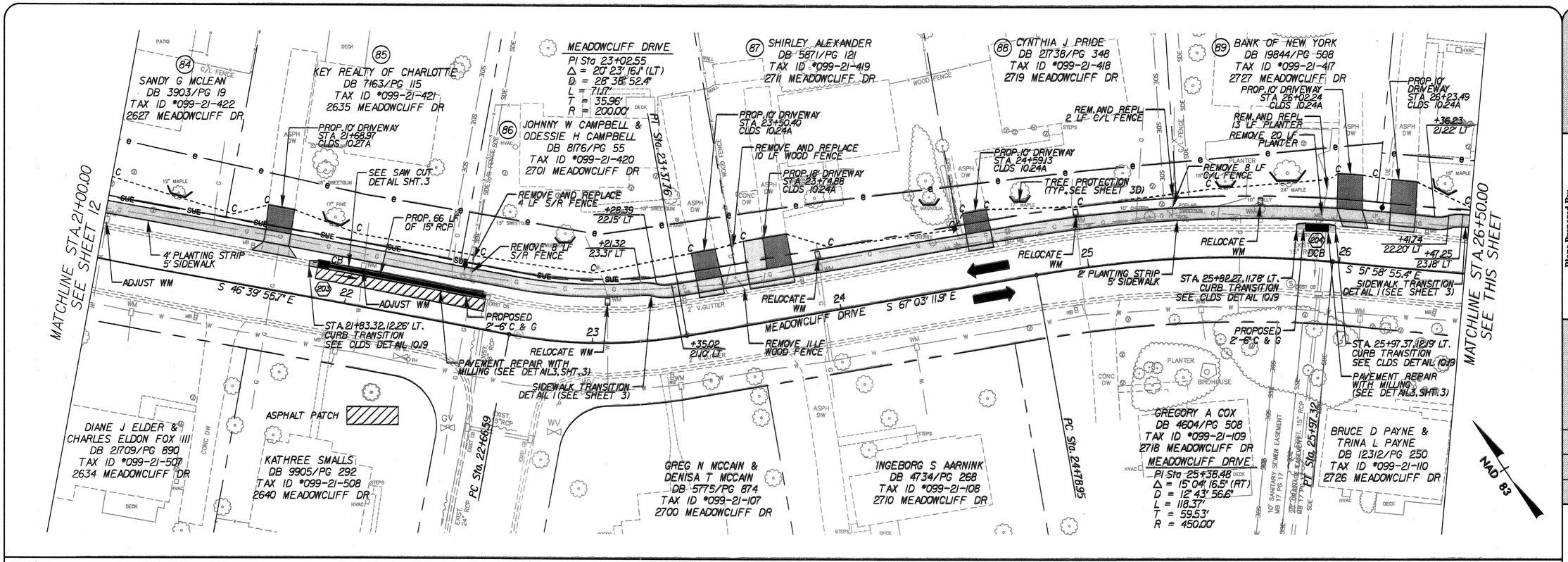
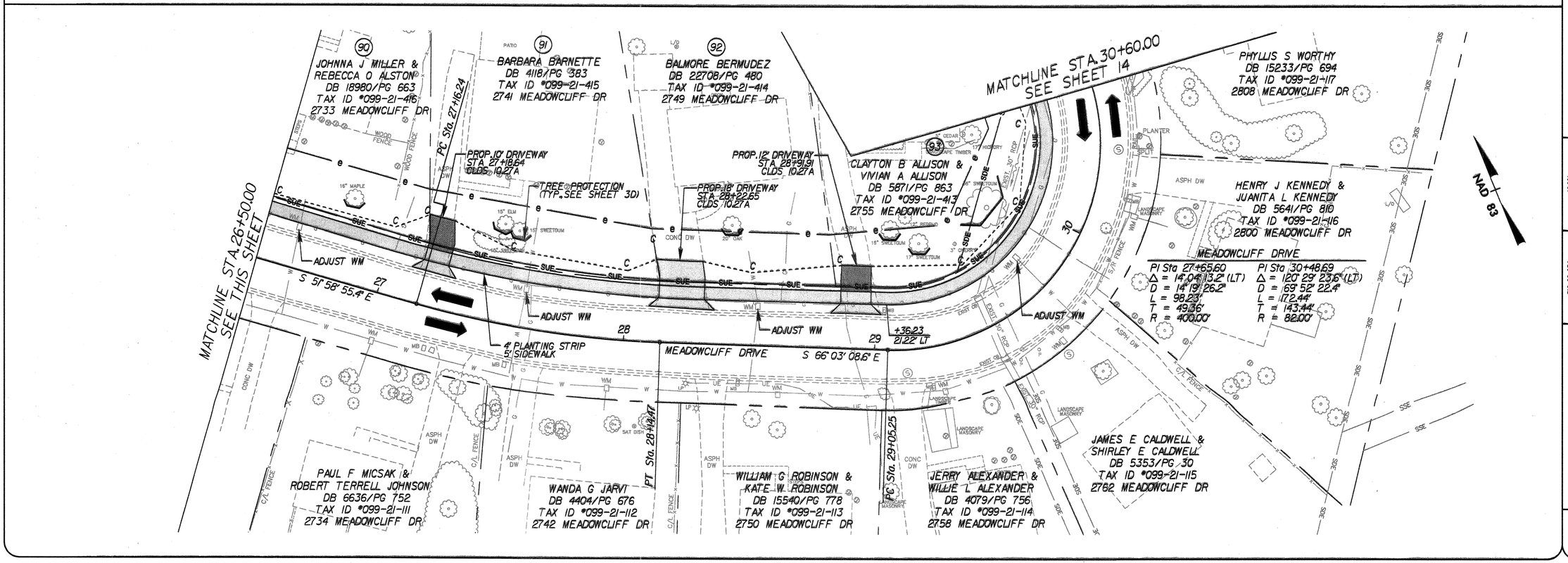
ABR	PREPARED BY
VYS	APPROVED BY

HOPE VALLEY/OAK FOREST NEIGHBORHOOD IMPROVEMENT PROJECT

MEADOWCLIFF DRIVE STA. 11+00.00 TO 21+00.00

SHEET 12 OF 23





CHARLOTTE

Plans Prepared By:

ATKINS
5200 77 CENTER DRIVE, SUITE 600
CHARLOTTE, N.C. 28217
PHONE: (704) 522-7275
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 28235 ENGINEER VIRGINIA T. SCHARR 3/31/14

NORTH CAROLINA PROFESSIONAL SEAL 37839 ENGINEER MICHAEL P. BAREFOOT 03/31/14

512-08-054 JOB NO.	1"=20' SCALE
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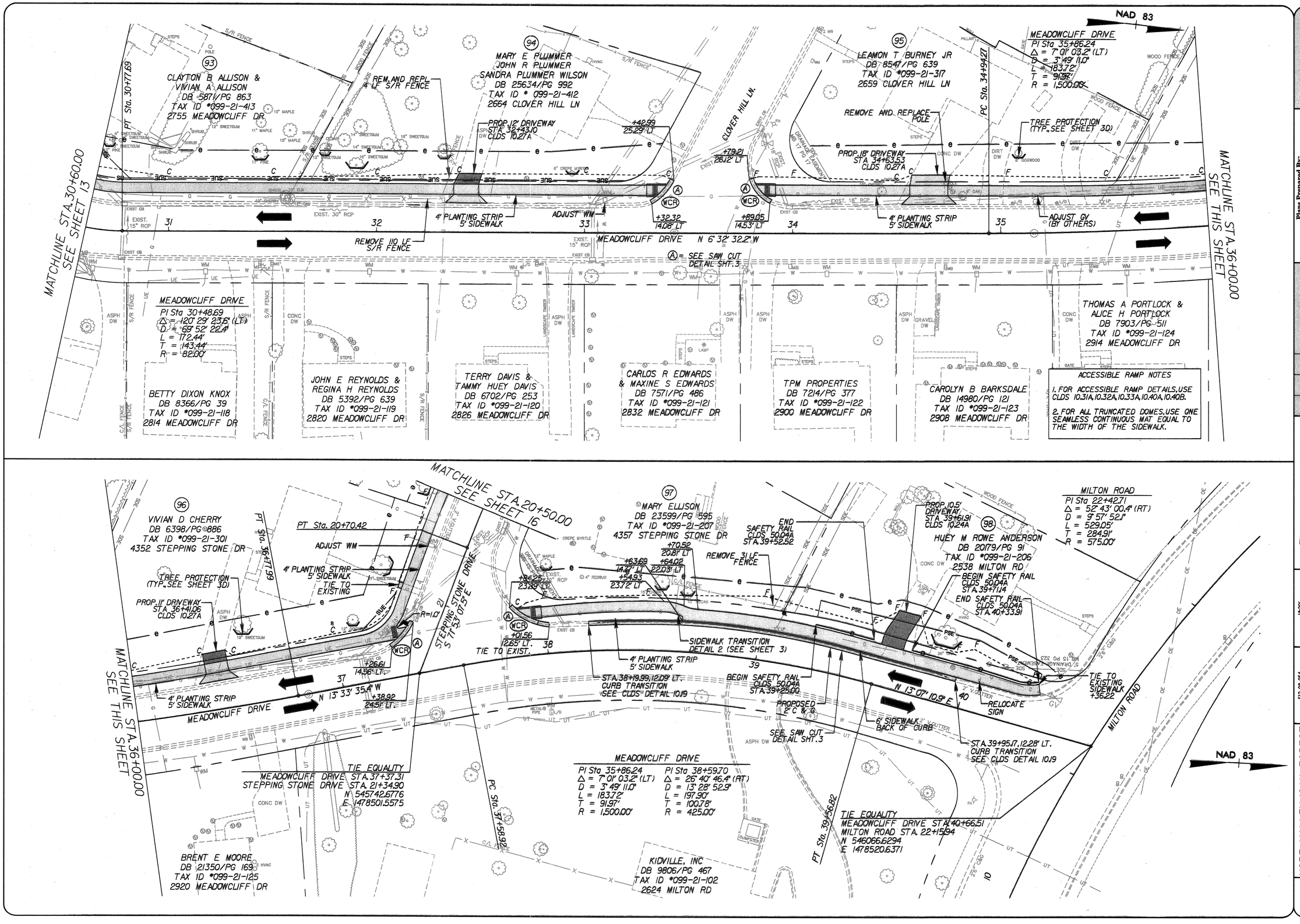
ABR PREPARED BY	MARCH 2014 DATE
VYS APPROVED BY	

HOPE VALLEY/OAK FOREST NEIGHBORHOOD IMPROVEMENT PROJECT

MEADOWCLIFF DRIVE STA. 21+00.00 TO 30+60.00

SHEET 13 OF 23



CHARLOTTE

Plans Prepared By:

ATKINS

5200 77 CENTER DRIVE, SUITE 500
CHARLOTTE, N.C. 28217
PHONE: (704) 522-7275
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 28235 ENGINEER VIRGINIA T. SCHRAN 3/31/14

NORTH CAROLINA PROFESSIONAL SEAL 37830 ENGINEER MICHAEL P. BAREFOOT 03/31/14

512-08-054 JOB NO.	1"=20' SCALE
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ABR PREPARED BY	MARCH 2014 DATE
VYS APPROVED BY	

HOPE VALLEY/OAK FOREST NEIGHBORHOOD IMPROVEMENT PROJECT

MEADOWCLIFF DRIVE STA. 30+60.00 TO 40+66.51

SHEET 14 OF 23

GENERAL NOTES

PROPOSED CURB ELEVATIONS:

THE CONTRACTOR SHALL SET AND ADJUST PROPOSED CURB ELEVATIONS AS NECESSARY TO ENSURE PROPER LONGITUDINAL GRADE FOR DRAINAGE. THE CONTRACTOR SHALL RETAIN EXISTING PAVEMENT, UNLESS OTHERWISE NOTED.

DRIVEWAYS AND SIDEWALKS:

PROPOSED DRIVEWAY ENTRANCE DIMENSIONS ARE FROM EXPANSION JOINT TO EXPANSION JOINT. MATCH REPLACEMENT MATERIALS TO THE EXISTING SURFACE ACCORDINGLY:

- CONCRETE – SIX INCH PORTLAND CEMENT CONCRETE (3600 PSI).
- ASPHALT – (COMMERCIAL) TWO INCH SF9.5B COURSE AND FOUR INCH I19.0B INTERMEDIATE COURSE.
  (RESIDENTAL) TWO INCH SF9.5C COURSE AND FOUR INCH AGGREGATE BASE COURSE (ABC).
- GRAVEL – SIX INCH INCIDENTAL STONE

DRAINAGE STRUCTURES:

GRADES, ELEVATIONS AND LOCATIONS SHOWN ARE APPROXIMATE. AS DIRECTED BY THE ENGINEER, THEY MAY BE ADJUSTED TO ACCOMMODATE UNFORESEEN CONDITIONS. STATIONS, OFFSETS AND ELEVATIONS REFER TO THE CENTER OF DROP INLETS, MANHOLES AND JUNCTION BOXES, AND THE MIDPOINT OF THE LIP FOR CATCH BASINS. ALL PIPES SHALL BE RCP CLASS III, UNLESS OTHERWISE NOTED.
WEEPHOLES ARE TO BE CONSTRUCTED IN ALL DRAINAGE STRUCTURES, A MINIMUM OF 1 WEEPHOLE PER STRUCTURE. WEEPHOLES ARE TO BE CONSTRUCTED IN THE BOTTOM 1/3 OF STRUCTURE AND COVERED ON THE OUTSIDE OF THE STRUCTURE BY A BAG MADE OF FILTER FABRIC AND FILLED W/#78 STONE. THERE WILL BE NO SEPARATE PAYMENT FOR THIS WORK.

UTILITIES:

UTILITIES ARE ILLUSTRATED FOR INFORMATION PURPOSES ONLY. THE CITY WILL NOT BE HELD RESPONSIBLE FOR THE ACCURACY OF UTILITY LOCATIONS, SIZES, DEPTHS, OR FOR COMPLETENESS OF UTILITY INFORMATION.
PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY AND MEET WITH ALL UTILITY OWNERS, THE CITY UTILITY COORDINATOR AND CITY INSPECTOR WHOSE FACILITIES WILL BE AFFECTED TO DETERMINE UTILITY LOCATIONS. THE CONTRACTOR SHALL PROTECT ALL UTILITIES FROM DAMAGE CAUSED BY HIS OPERATIONS OR THOSE OF HIS AGENTS. THE CONTRACTOR SHALL HOLD THE CITY HARMLESS FOR ANY THIRD-PARTY INCONVENIENCE CREATED BY WORK OF HIS OWN FORCES OR THAT OF HIS AGENTS. ANY DAMAGES INCURRED SHALL BE THE CONTRACTORS FINANCIAL RESPONSIBILITY.
AS NEEDED, THE CONTRACTOR SHALL ADJUST/RELOCATE THE SANITARY SEWER AND WATER LINES ONLY. ALL OTHER ADJUSTMENTS/RELOCATIONS WILL BE PERFORMED BY THE VARIOUS UTILITY OWNERS. THE CONTRACTOR SHALL COORDINATE WORK WITH UTILITY OWNERS SO AS NOT TO ADVERSELY AFFECT THE PROJECT SCHEDULE. THE CITY WILL NOT BE HELD RESPONSIBLE FOR ANY DELAYS OR DISRUPTIONS TO THE WORK SCHEDULE OF OTHER UTILITY OWNERS.

- FOR UTILITY LOCATES CALL NORTH CAROLINA ONE-CALL @ 1-800-632-4949.
- FOR LOCATES OF UTILITIES NOT MEMBERS OF NORTH CAROLINA ONE-CALL CONTACT PROJECT MANAGER & UTILITY COORDINATOR.

THE CONTRACTOR SHALL ADJUST ALL WATER VALVES, WATER METER BOXES AND WATER VAULTS TO FINISHED GRADE. WATER METERS LOCATED IN SIDEWALKS OR CONCRETE DRIVEWAYS SHALL BE INSTALLED WITHIN CONCRETE BOXES.

GAS LINES WILL BE ADJUSTED/RELOCATED AS NEEDED BY PIEDMONT NATURAL GAS. A REPRESENTATIVE OF PIEDMONT NATURAL GAS MUST BE PRESENT JUST PRIOR TO AND DURING CONSTRUCTION NEAR EXISTING GAS LINES, THE CONTRACTOR SHALL CONTACT PIEDMONT NATURAL GAS ATLEAST TWO WEEKS PRIOR TO CONSTRUCTION.

EXISTING SANITARY SEWER AND WATER LINE:

PRIOR TO THE BEGINNING OF ANY WATER AND/OR SANITARY SEWER WORK, CONTACT THE CMU PROJECT MANAGER, FRED HUNTER, AT 704-391-5124, AND AN INSPECTOR WILL BE PROVIDED FOR WORK OVERSIGHT.

WHERE SANITARY SEWERS AND WATER LINES ARE ENCOUNTERED, THE CONTRACTOR SHALL USE CARE IN WORKING AROUND OR NEAR THEM. IF AN EXISTING SEWER OR WATER LINE IS DAMAGED, THE CONTRACTOR SHALL IMMEDIATELY REPORT THE PROBLEM TO CHARMECK 311 AND THE CMU PROJECT MANAGER, AND REPLACE THE SEWER OR WATER LINE WITH CLASS 350 DUCTILE IRON PIPE. THE CONTRACTOR SHALL REPLACE A MINIMUM OF 18 FEET OF SANITARY SEWER AND/OR WATER LINE WITH CLASS 350 DUCTILE IRON PIPE WHEN ANY OF THE MINIMUM SEPARATION DISTANCES OUTLINED IN THE SPECIAL PROVISIONS FOR THIS PROJECT ARE NOT MET. ALL WATER VALVES, WATER METER BOXES, AND WATER VAULTS AFFECTED BY THIS CONSTRUCTION ARE TO BE ADJUSTED TO THE FINISHED GRADE BY THE CONTRACTOR.

WATER AND SEWER MAINS ARE TO REMAIN ACTIVE DURING CONSTRUCTION. IF THIS IS NOT POSSIBLE, THE CONTRACTOR SHALL FOLLOW CMU PROCEDURES AS OUTLINED IN THE DESIGN MANUAL AND SPECIAL PROVISIONS REGARDING OUTAGES, TEMPORARY WATER SERVICE AND BYPASS SEWER PUMPING.

SANITARY SEWER AND WATER SERVICE LATERALS ARE NOT SHOWN ON THESE PLANS AND WILL BE ENCOUNTERED DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH CMU PERSONNEL TO ENSURE THAT ALL EXISTING SERVICES ARE RELOCATED AND KEPT IN SERVICE. THIS WORK IS INCIDENATL TO ALL CONSTRUCTION ACTIVITIES.

SUBSURFACE PLANS:

NO SUBSURFACE PLANS ARE AVAILABLE ON THIS PROJECT. THE CONTRACTOR MAY MAKE HIS OWN INVESTIGATION TO DETERMINE SUBSURFACE CONDITIONS.

MAIL BOXES:

THE CONTRACTOR SHALL RELOCATE ALL MAIL BOXES AS REQUIRED BY SECTION 107-12 OF THE NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES. COORDINATE THIS WORK WITH THE U.S. POSTAL SERVICE.

FENCES:

THE CONTRACTOR SHALL REMOVE AND RESET FENCES AS NOTED ON THE PLANS AND/OR AS DIRECTED BY THE ENGINEER.

TREES, SHRUBS, AND HEDGES:

THE CONTRACTOR IS REQUIRED TO REMOVE TREES, SHRUBS, AND HEDGES WITHIN THE EASEMENT LINES UNLESS SHOWN ON THE PLANS TO BE PROTECTED. THE CONTRACTOR SHALL ALSO PROTECT TREES AND SHRUBS OUTSIDE OF CUT/FILL LINES, IN ADDITION TO THOSE THAT RECEIVE TREES/SHRUB PROTECTION BARRIERS. WHEN ROOT PRUNING IS NECESSARY, CUT ROOTS CLEANLY USING A DISC TRENCHER IN ACCORDANCE WITH SECTION 01000 OF THE CITY OF CHARLOTTE LANDSCAPE CONTRUCTION STANDARDS. PRUNING SHALL BE PER THE LATEST STANDARD OF THE LANDSCAPE CONSTRUCTION STANDARDS MANUAL (TYP.) USE PLYWOOD FORMS WHEN TREE ROOTS ARE ADJACENT TO PROPOSED CURB AND GUTTER OR SIDEWALK. USE CLD STD. 40.11 FOR BRIDGING TREE ROOTS. TREES SPECIFIED BY THE PLANS TO HAVE ASPHALT CURBING MUST USE CLD. STD. 40.13 TREE PROTECTION SHALL BE IN ACCORDANCE WITH CLD STD. 40.02 WHEN TREE IS CLOSE TO THE WORK AREA TREE PROTECTION CLD STD. 40.12 SHALL BE USED.

SIDE SLOPES:

LIMITS OF PROPOSED SLOPES ARE INDICATED IN THE PLANS, DETAILS AND STANDARD DRAWINGS. THE MAXIMUM SLOPE SHALL NOT EXCEED A 3:1 (HORIZONTAL TO VERTICAL) UNLESS DESIGNATED BY THE ENGINEER. A CUT SLOPE OF 2:1 MAXIMUM WILL BE USED ONLY AS DIRECTED BY THE ENGINEER.

EROSION CONTROL:

THE CONTRACTOR SHALL MAINTAIN EROSION CONTROL DEVICES IN ACCORDANCE WITH THE APPROPRIATE CITY AND STATE EROSION AND SEDIMENT CONTROL ORDINANCES. THE CONTRACTOR SHALL PREVENT STANDING WATER DUE TO CONSTRUCTION. DISTURBED AREAS SHALL BE SEEDED AND MULCHED AT THE DIRECTION OF THE ENGINEER. THE CONTRACTOR SHALL FOLLOW THE EROSION CONTROL MEASURES SHOWN ON SHEETS EC-1 THRU EC-21.

ACCESSIBLE RAMPS AND DEPRESSED CURB:

THE CONTRACTOR SHALL CONSTRUCT 6-INCH THICK CONCRETE ACCESSIBLE RAMPS AT INTERSECTIONS IN ACCORDANCE WITH THE LATEST REVISIONS FOR ACCESSIBLE RAMP DETAILS, CONSTRUCTION PLANS & NCDOT STANDARD DRAWINGS.

SAWCUTS:

THE CONTRACTOR SHALL SAWCUT EXISTING ASPHALT AND/OR CONCRETE SURFACES PRIOR TO REMOVAL UNLESS OTHERWISE DIRECTED BY THE ENGINEER. SAW CUT WIDTH SHALL BE 1 FOOT MINIMUM FROM THE EXISTING EDGE OF PAVEMENT. SAW CUT PAVEMENT SHALL BE REPLACED AS WELL AS ADDITIONAL PAVEMENT REQUIRED TO TIE-IN TO FACE OF PROPOSED CURB AND GUTTER.

GENERAL NOTES

PAVEMENT DEGRADATION FEE:

CDOT HAS DETERMINED THAT NO PAVEMENT DEGRADATION FEE IS TO BE ASSESSED.

TRAFFIC CONTROL:

TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE MOST CURRENT EDITIONS OF THE "WORK AREA TRAFFIC CONTROL HANDBOOK" (WATCH) AND THE TRAFFIC CONTROL PLANS ON SHEETS TCP-1 THRU TCP-3.

BENCH MARK:

CONTROL FOR THIS PROJECT SHALL BE ESTABLISHED FROM THE CITY OF CHARLOTTE "URSULA" MONUMENT. SEE PLAN SHEET NO. 4 FOR DATUM DESCRIPTION. ALL OTHER TEMPORARY BENCH MARK STATION/OFFSETS ARE APPROXIMATE.

UTILITY OWNERS

DUKE ENERGY COMPANY
6325 WILKINSON BLVD
CHARLOTTE, NC 28214

PIEDMONT NATURAL GAS COMPANY
P.O. BOX 33068
CHARLOTTE, NC 28233

TIME WARNER CABLE
4606 MARGARET WALLACE RD
MATTHEWS, NC 28105

CHARLOTTE DEPARTMENT OF TRANSPORTATION
600 EAST FOURTH ST
CHARLOTTE, NC 28202-2844

CHARLOTTE MECKLENBURG UTILITY
5100 BROOKSHIRE BLVD
CHARLOTTE, NC 28216

TELICS (AT&T AND TIME WARNER REPRESENTATIVE)
4100 SOUTH STREAM BLVD
ROOM 340
CHARLOTTE, NC 28217

ICG TELECOM GROUP, INC
230 SOUTH TRYON STREET
CHARLOTTE, NC 28202

PIEDMONT NATURAL GAS COMPANY SPECIAL PROVISIONS:

1. A PIEDMONT NATURAL GAS COMPANY (PNG) REPRESENTATIVE SHALL BE PRESENT AT ALL TIMES WHEN THE CONTRACTOR IS WORKING NEAR A PNG GAS TRANSMISSION LINE WITHIN THE PROJECT LIMITS. THE CONTRACTOR SHALL NOTIFY PNG AT LEAST 48 HOURS PRIOR TO UNDERTAKING ANY PHASE OF THE WORK WHICH ENCROACHES NEAR A GAS TRANSMISSION LINE.
2. PNG PERSONNEL CONTACT : JAMES GRAHAM (704) 525-1654 EXT. 7274
3. PRIOR TO UNDERTAKING ANY DIGGING WITHIN THE PROJECT LIMITS, THE CONTRACTOR SHALL VERYIFY THE DEPTH OF THE GAS TRANSMISSION LINE. IF A LINE IS FOUND TO BE IN CONFLICT WITH ANY PROPOSED CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER. NO FURTH WORK MAY BE UNDERTAKEN UNTIL SUCH CONFLICTS ARE RESOLVED.
4. THE CONTRACTOR SHALL NOT STORE ANY HEAVY EQUIPMENT ON TOP OF A GAS TRANSMISSION LINE.
5. WHERE HEAVY EQUIPMENT MUST OPERATE ON TOP OF A GAS TRANSMISSION LINE, THE CONTRACTOR SHALL TAKE APPROPRIATE MEASURES TO ENSURE THAT DAMGE TO THE LINE IS PREVENTED. SHOULD ANY DAMAGE OCCUR, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY PNG OF SUCH DAMAGE. THE CONTRACTOR SHALL COOPERATE FULLY WITH PNG AND THE CITY IN REPAIRING SUCH DAMAGE.

ABBREVIATIONS

ABAND	ABANDONED
A.D.	ALGEBRAIC DIFFERENCE
ASPH	ASPHALT
APPROX	APPROXIMATELY
B/C	BACK OF CURB
BIT	BITUMINOUS
BM	BENCH MARK
BRG	BEARING
CB	CATCH BASIN
C&G	CURB AND GUTTER
CL	CLEARANCE
FENCE	CHAIN LINK FENCE
CMP	CORRUGATED MTL PIPE
PIPE CONC	CONCRETE
CONST	CONSTRUCTION
DB	DEED BOOK
DCB	DOUBLE CB
DI	DROP INLET
DIA	DIAMETER
DW	DRIVEWAY
DIM	DIMENSION
E	EAST/EASTING
EA	EACH
ELEV	ELEVATION
EOP	EDGE OF PAVEMENT
ESMT	EASEMENT
EVC	END VC
EXIST	EXISTING
F/C	FACE OF CURB
FES	FLARED END SECTION
FH	FIRE HYDRANT
FOC	FIBER OPTIC CABLE
GV	GAS VALVE
HORIZ	HORIZONTAL
INT	INTERSECTION
INV	INVERT
IP	IRON PIN SET
L	LENGTH
LF	LINEAR FOOTAGE
LT	LEFT
lb	POUND
LP	LIGHT POLE
MAX	MAXIMUM
MIN	MINIMUM
MONO	MONOLITHIC
mph	MILES PER HOUR
MTL	METAL
N	NORTH/NORTHING
NTS	NOT TO SCALE
OC	ON CENTER
O/H	OVERHEAD
PAVT	PAVEMENT
PC	POINT OF CURVATURE
PERM	PERMANENT
PG	PAGE
PI	POINT OF INT
PK	PK NAIL SET
PP	POWER POLE
PROP	PROPOSED
PSE	PERM SW ESMT
PT	POINT OF TANGENCY
PVI	POINT OF VERT INT
PUE	PERM UTILITY ESMT
r	RADIUS
RT	RIGHT
RCP	REINFORCED CONC
PIPE RELOC	RELOCATE
R/W	RIGHT OF WAY
S	SOUTH
SD	STORM DRAIN
SF	SQUARE FOOT
FENCE	SPLIT RAIL FENCE
SS	SANITARY SEWER
STA	STATION
STD	STANDARD
SW	SIDEWALK
TAN	TANGENT
TCE	TEMP CONST ESMT
TEMP	TEMPORARY
TP	TRAVERSE POINT
T/W	TEST WIRE
TYP	TYPICAL
U/G	UNDERGROUND
VC	VERTICAL CURVE
VERT	VERTICAL
W	WEST
W/	WITH
WM	WATER METER
VAULT	WATER VAULT
WV	WATER VALVE
60p	SIXTY PENNY NAIL SET
'	FOOT
"	INCH

STANDARDS

THE FOLLOWING STANDARDS AND THE LATEST REVISION THERETO ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE ARE CONSIDERED A PART OF THESE PLANS. NCDOT STANDARDS SHALL BE USED. CHARLOTTE LAND DEVELOPMENT STANDARDS MAY BE USED IF THERE IS NOT AN APPLICABLE NCDOT STANDARD.

NCDOT:

STD. NO.:	TITLE:
200.02	STANDARD METHOD OF CLEARING, METHOD II
225.02	GUIDE FOR GRADING SUBGRADE – SECONDARY & LOCAL
225.04	METHOD OF OBTAINING SUPERELEVATIONS – TWO LANE PAVEMENT
300.01	METHOD OF PIPE INSTALLATION – METHOD 'A'
654.01	PAVEMENT REPAIRS
840.54	MANHOLE FRAME AND COVER
840.66	DRAINAGE STRUCTURE STEPS
840.72	PIPE COLLAR
848.01	CONCRETE SIDEWALK
901.50	ARROWS AND SHIELDS
1101.02	TEMPORARY LANE CLOSURES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW PANELS
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGERS
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - DIVIDED AND UNDIVIDED ROADWAYS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1250.01	PAVEMENT MARKER SPACING
1251.01	RAISED PAVEMENT MARKERS
1605.01	TEMPORARY SILT FENCE
1606.01	SPECIAL SEDIMENT CONTROL FENCE
1632.02	ROCK INLET SEDIMENT TRAP TYPE 'B'
1632.03	ROCK INLET SEDIMENT TRAP TYPE 'C'

CHARLOTTE-MECKLENBURG:

STD. NO.:	TITLE:
10.17A	CURB AND GUTTER
10.17B	CURB AND GUTTER
10.19	CURB TRANSITION 2'-6" CURB AND GUTTER TO 2'-0" VALLEY GUTTER
10.22	CONCRETE SIDEWALKS
10.24A	COMMERCIAL TYPE II AND RESIDENTIAL TYPE I DROP CURB DRIVEWAY WITH SIDEWALK ABUTTING CURB (2'-6" CURB & GUTTER)
10.27A	RESIDENTIAL DRIVEWAY (TYPE I) FOR 2'-0" VALLEY GUTTER
10.31A	ACCESSIBLE RAMP STANDARD WITH PLANTING STRIP – 2'-6" CURB AND GUTTER
10.31B	ACCESSIBLE RAMP SECTIONS WITH PLANTING STRIP – 2'-6" CURB AND GUTTER
10.32A	ACCESSIBLE RAMP STANDARD WITHOUT PLANTING STRIP – 2'-6" CURB AND GUTTER
10.32B	ACCESSIBLE RAMP SECTIONS WITHOUT PLANTING STRIP – 2'-6" CURB AND GUTTER
10.35A	STANDARD PLACMENT OF ACCESSIBLE RAMPS AND GENERAL NOTES
10.40A	DIRECTIONAL ACCESSIBLE RAMP WITH SMALL/MEDIUM CURB RADII
10.40B	DIRECTIONAL ACCESSIBLE RAMP WITH LARGE CURB RADIUS
20.00A	NCDOT STANDARDS APPROVED FOR USE IN THE CITY OF CHARLOTTE AND CHARLOTTE ETJ
20.00B	NCDOT STANDARDS APPROVED FOR USE IN THE CITY OF CHARLOTTE AND CHARLOTTE ETJ
20.01A	BRICK CATCH BASIN – 15" THRU 54" PIPE
20.01B	BRICK CATCH BASIN – 15" THRU 54" PIPE
20.02A	FRAME, GRATE AND HOOD
20.02B	FRAME, GRATE AND HOOD
20.12	DRAINAGE STRUCTURE STEPS
30.06	TEMPORARY SILT FENCE
40.11	BRIDGING TREE ROOTS
40.12	TEMPORARY TREE PROTECTION DETAIL
50.04A	SAFETY RAIL

N.C. SEDIMENTATION CONTROL COMMISSION STANDARD DRAWINGS:

THE FOLLOWING STANDARD PRACTICES AND SPECIFICATIONS, AS PRESENTED IN THE "EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL," BY THE N.C. SEDIMENTATION CONTROL COMMISSION, N.C. DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT, AND DIVISION OF LAND RESOURCES LAND QUALITY SECTION, DATED SEPTEMBER 1, 1988, WITH THE LATEST REVISIONS DATED DECEMBER 1, 1993, ARE INCLUDED AS REFERENCE FOR THE CONSTRUCTION OF THIS PROJECT.

PRACTICE NO.:	DESCRIPTION:
6.11	PERMANENT SEEDING
6.14	MULCHING
6.51	FABRIC DROP INLET PROTECTION
6.62	SEDIMENT FENCE

CHARLOTTE.

Plans Prepared By:
ATKINS
5200 77 CENTER DRIVE, SUITE 500
CHARLOTTE, N.C. 28217
PHONE: (704) 522-7275
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 28235 ENGINEER VIRGINIA T. SCHAAR
3/31/14

512-08-054 JOB NO.	NTS SCALE
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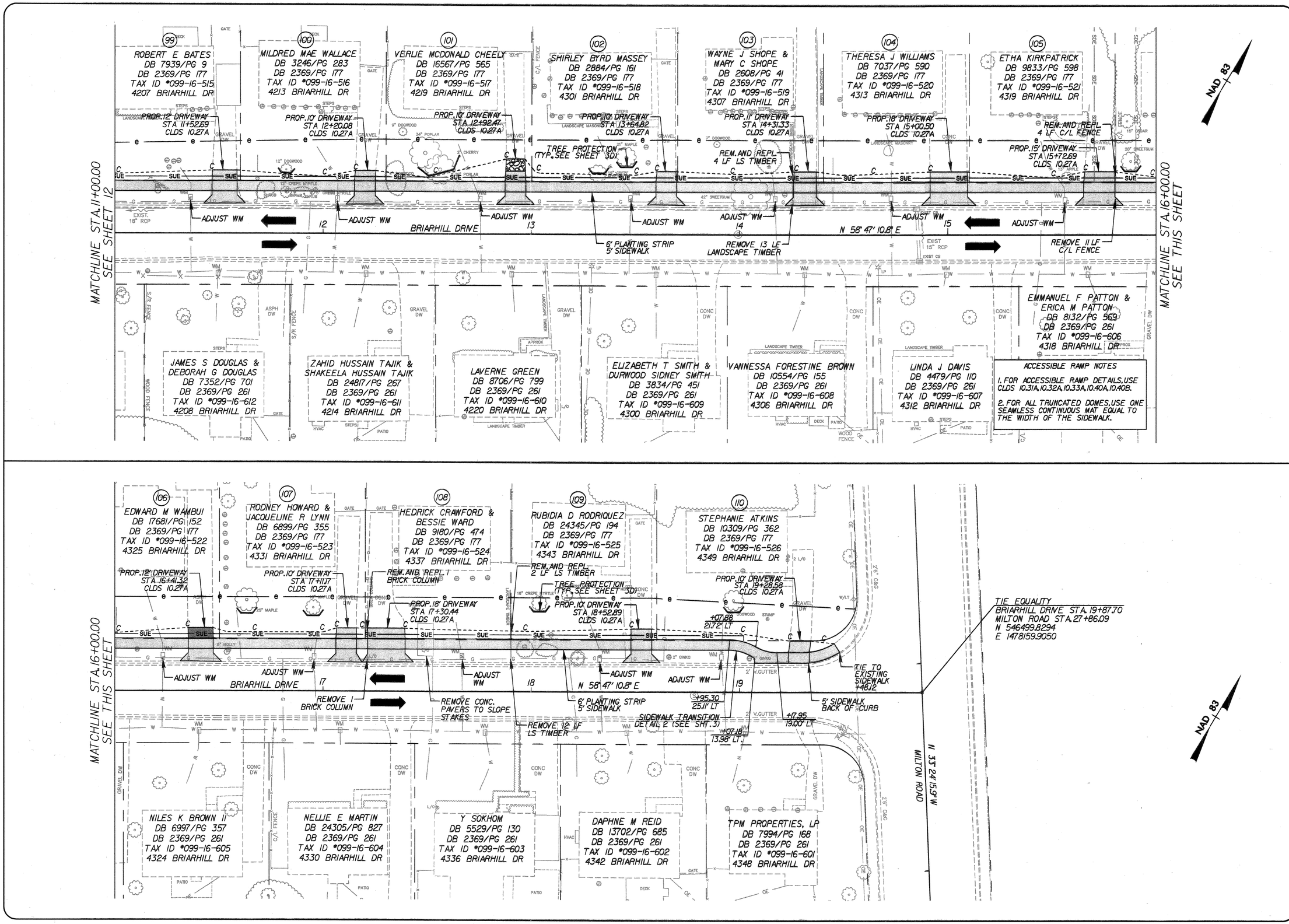
ABR PREPARED BY	DWB CHECKED BY
VTS APPROVED BY	MARCH 2014 DATE

HOPE VALLEY/OAK FOREST NEIGHBORHOOD IMPROVEMENT PROJECT

GENERAL NOTES

SHEET 2 OF 23



CHARLOTTE.

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PHONE: (704) 522-7275
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 28235 ENGINEER VIRGINIA T. SCHARR 3/31/14

NORTH CAROLINA PROFESSIONAL SEAL 37830 ENGINEER MICHAEL P. BAREFOOT 03/31/14

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ABR PREPARED BY	MARCH 2014 DATE
VTS APPROVED BY	

HOPE VALLEY/OAK FOREST NEIGHBORHOOD IMPROVEMENT PROJECT

BRIARHILL DRIVE STA. 11+00.00 TO 19+87.70

SHEET 15 OF 23

CHARLOTTE

Plans Prepared By:

ATKINS
5200 77 CENTER DRIVE, SUITE 600
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PHONE: (704) 522-7275
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 28235 ENGINEER VIRGINIA T. SCHIAN 5/31/14

NORTH CAROLINA PROFESSIONAL SEAL 37830 ENGINEER MICHAEL P. BAREFOOT 05/31/14

1"=20'	SCALE
DWG	CHECKED BY
MARCH 2014	DATE
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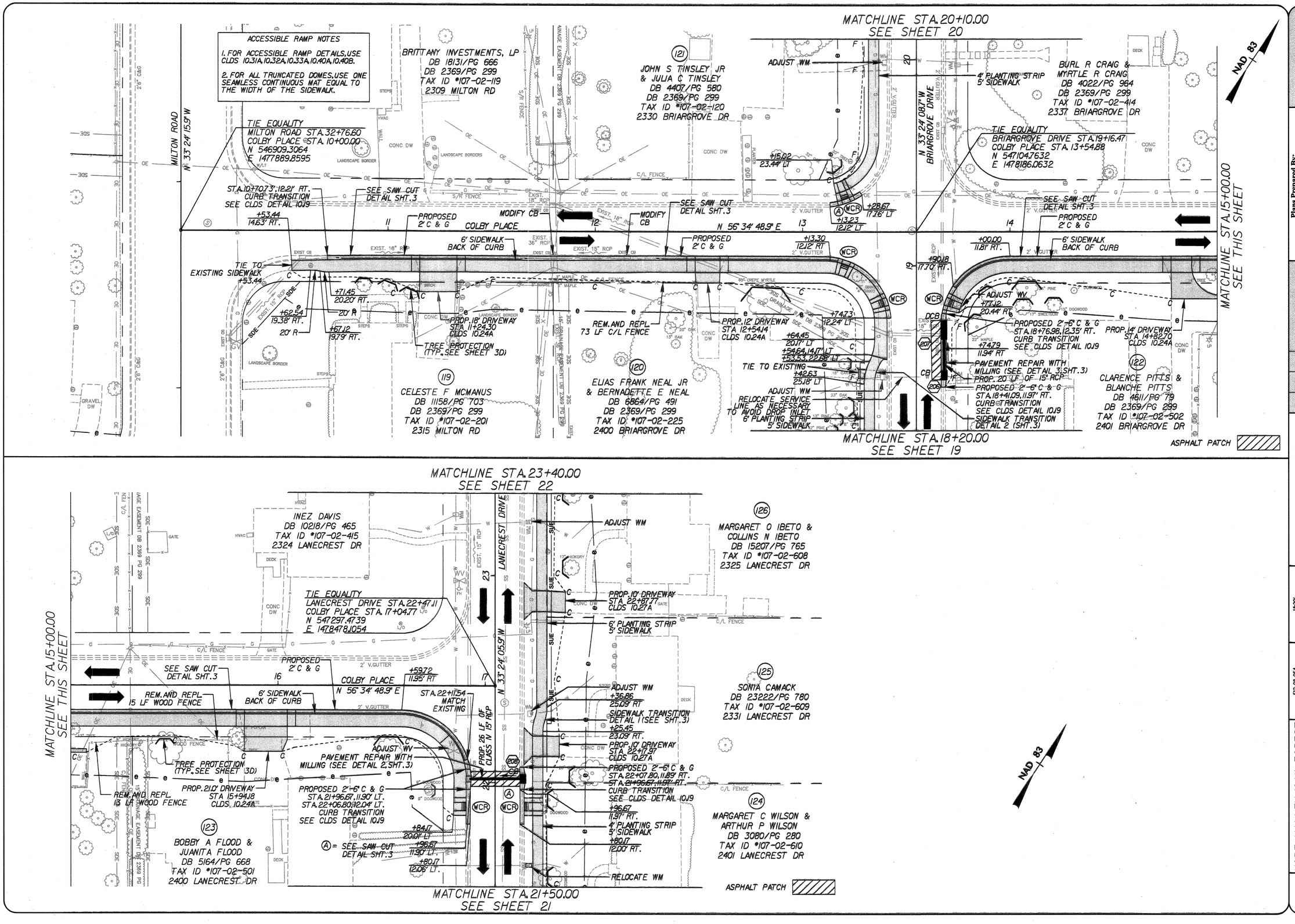
ABR	PREPARED BY
VTS	APPROVED BY

HOPE VALLEY/OAK FOREST NEIGHBORHOOD IMPROVEMENT PROJECT

STEPPING STONE DRIVE STA.10+70.00 TO 20+50.00

SHEET 16 OF 23



CHARLOTTE

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PHONE: (704) 522-7275
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 28235 ENGINEER VIRGINIA T. SCHALK 3/31/14

NORTH CAROLINA PROFESSIONAL SEAL 27839 ENGINEER MICHAEL P. BAREFOOT 03/31/14

512-08-0054 JOB NO.	1"=20' SCALE
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ABR PREPARED BY	DWB CHECKED BY
VTS APPROVED BY	MARCH 2014 DATE

HOPE VALLEY/OAK FOREST NEIGHBORHOOD IMPROVEMENT PROJECT

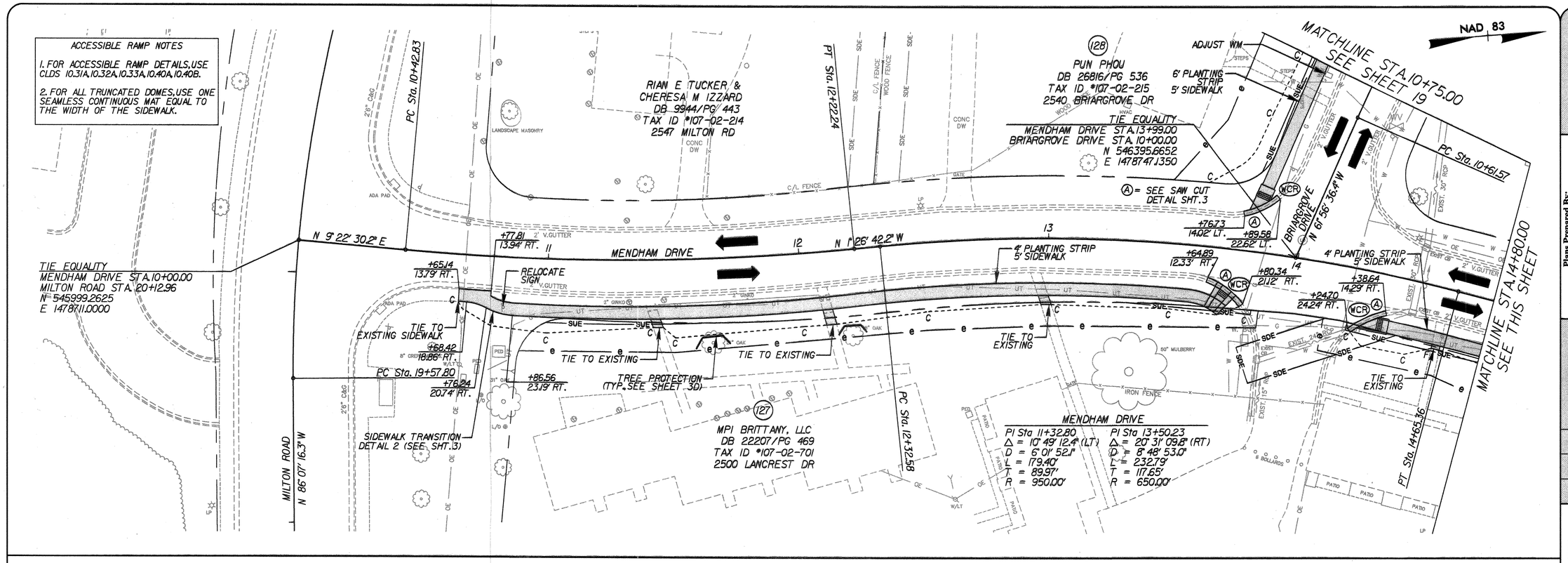
COLBY PLACE STA. 10+00.00 TO 17+04.77

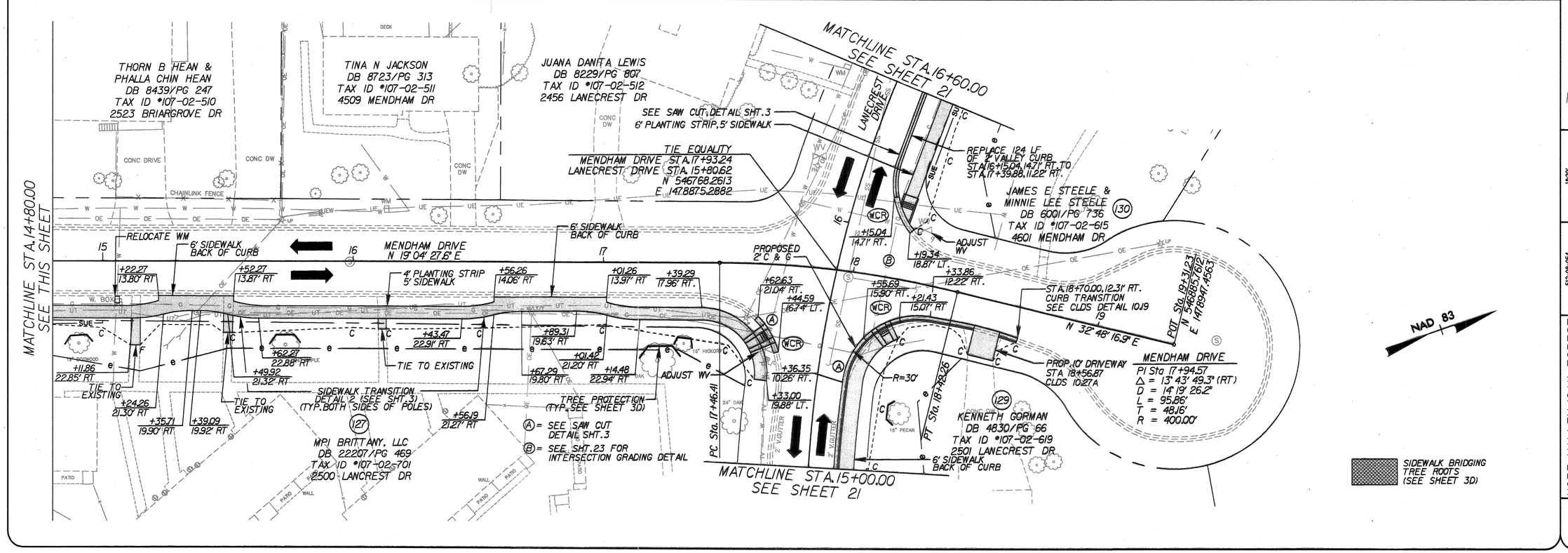
SHEET 17 OF 23

ACCESSIBLE RAMP NOTES

1. FOR ACCESSIBLE RAMP DETAILS, USE CLDS 10.31A, 10.32A, 10.33A, 10.40A, 10.40B.

2. FOR ALL TRUNCATED DOMES, USE ONE SEAMLESS CONTINUOUS MAT EQUAL TO THE WIDTH OF THE SIDEWALK.





CHARLOTTE

Plans Prepared By:

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6200 77 CENTER DRIVE, SUITE 500
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PHONE: (704) 522-1276
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 28235 ENGINEER VIRGINIA T. SCHAIR 03/31/14

NORTH CAROLINA PROFESSIONAL SEAL 37830 ENGINEER MICHAEL P. BAREFOOT 03/31/14

1"=20'	SCALE
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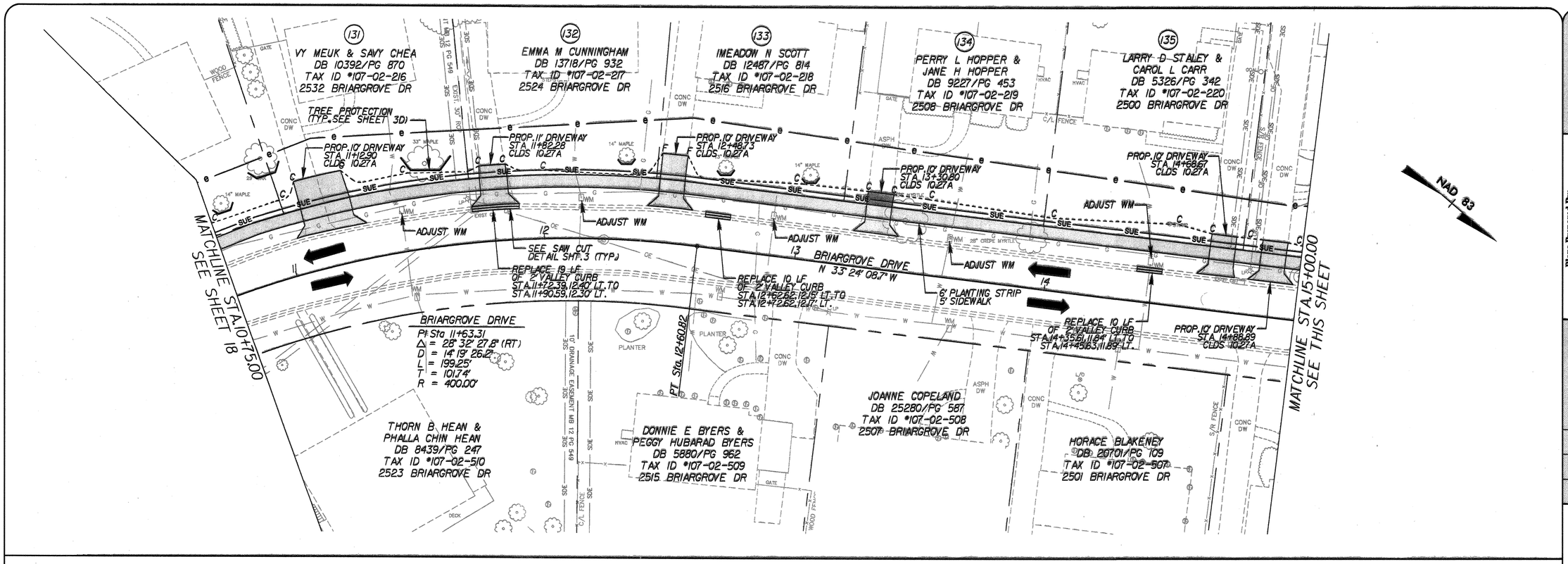
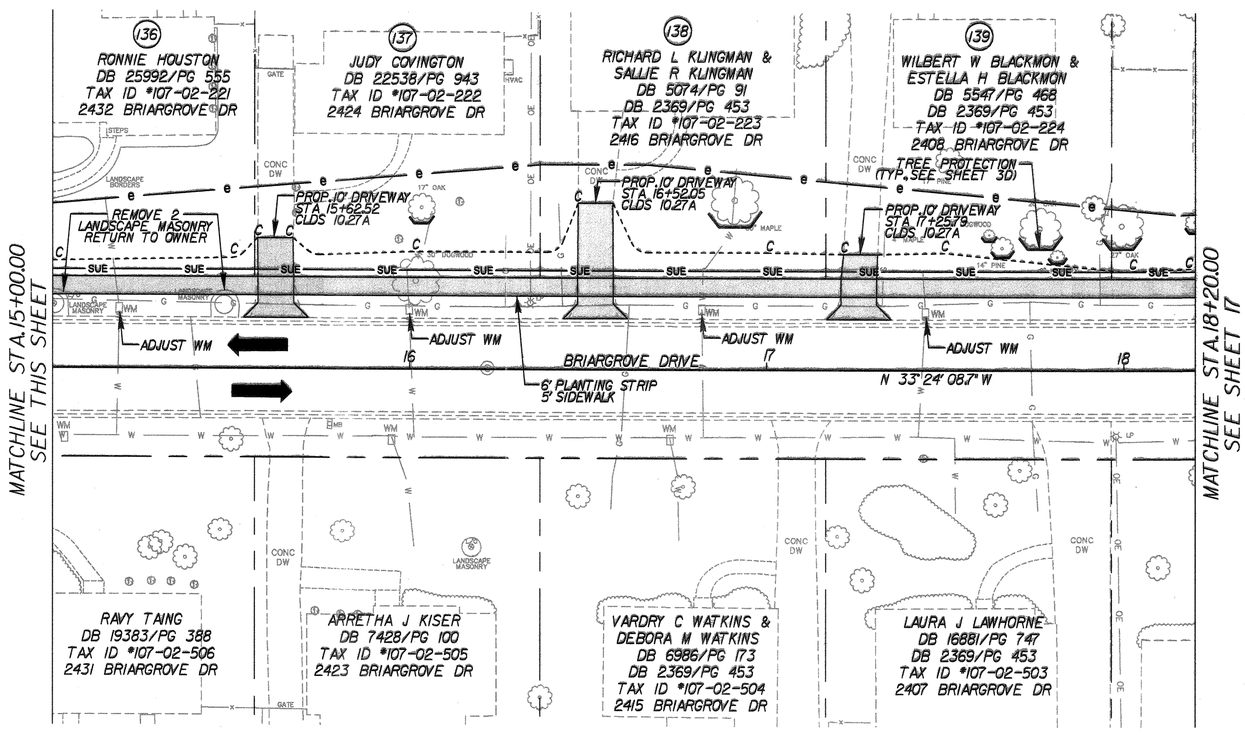
DWG	CHECKED BY
MARCH 2014	DATE
512-08-054	JOB NO.
ABR	PREPARED BY
VTS	APPROVED BY

HOPE VALLEY/OAK FOREST NEIGHBORHOOD IMPROVEMENT PROJECT

MENDHAM DRIVE STA. 10+00.00 TO 19+31.23

SHEET 18 OF 23





CHARLOTTE

Plans Prepared By:

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PHONE: (704) 522-7275
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 28235 ENGINEER VIRGINIA T. SCHIAR 03/31/14

NORTH CAROLINA PROFESSIONAL SEAL 37936 ENGINEER MICHAEL P. BAREFOOT 03/31/14

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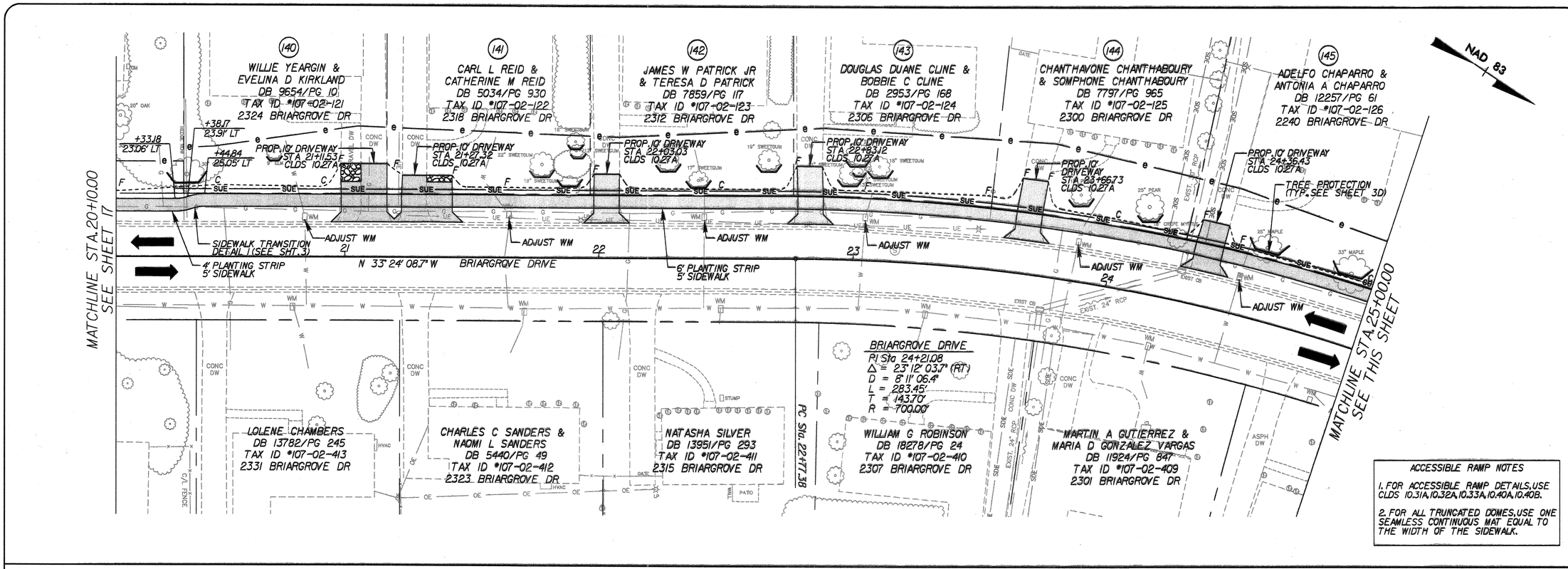
VYS APPROVED BY	MARCH 2014 DATE

HOPE VALLEY/OAK FOREST NEIGHBORHOOD IMPROVEMENT PROJECT

BRIARGROVE DRIVE STA.10+75.00 TO 18+20.00

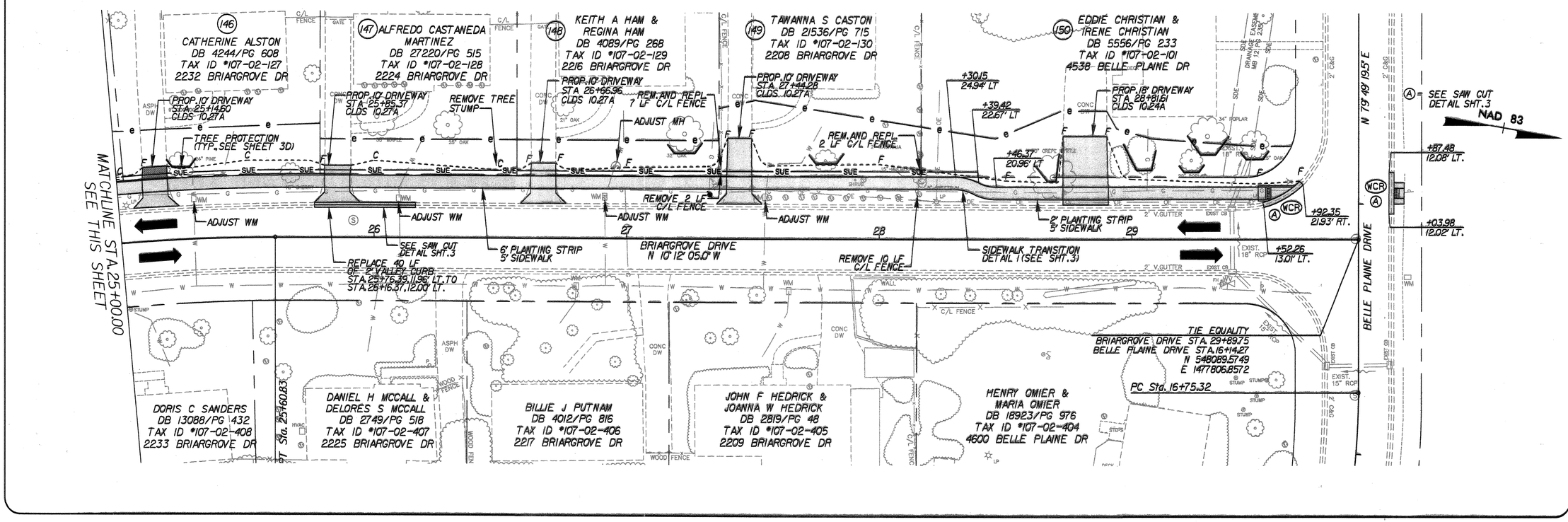
SHEET 19 OF 23



ACCESSIBLE RAMP NOTES

1. FOR ACCESSIBLE RAMP DETAILS, USE CLDS 10.31A, 10.32A, 10.33A, 10.40A, 10.40B.

2. FOR ALL TRUNCATED DOMES, USE ONE SEAMLESS CONTINUOUS MAT EQUAL TO THE WIDTH OF THE SIDEWALK.



CHARLOTTE

Plans Prepared By:

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5300 77 CENTER DRIVE, SUITE 500
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PHONE: (704) 522-7275
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 28235 ENGINEER VIRGINIA T. SCHMAN 03/31/14

NORTH CAROLINA PROFESSIONAL SEAL 27830 ENGINEER MICHAEL P. BATEFORD 03/31/14

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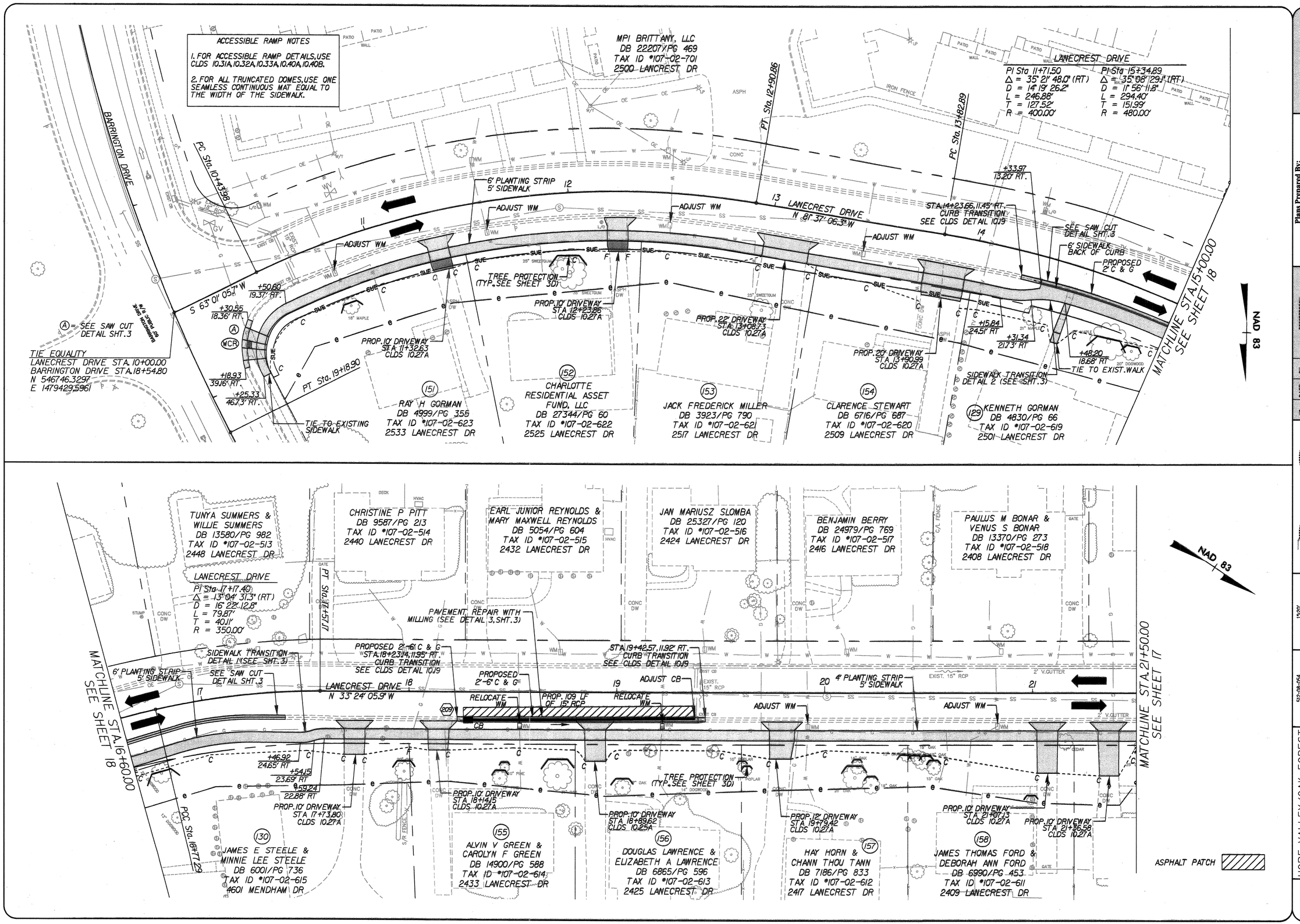
ABR PREPARED BY	DWB CHECKED BY
VTS APPROVED BY	MARCH 2014 DATE

HOPE VALLEY/OAK FOREST NEIGHBORHOOD IMPROVEMENT PROJECT

BRIARGROVE DRIVE STA. 20+10.00 TO 29+89.75

SHEET 20 OF 23



Plans Prepared By:

ATKINS
5200 77 CENTER DRIVE, SUITE 600
CHARLOTTE, N.C. 28277
PHONE: (704) 522-7275
NCBELS #F-0326

CHARLOTTE

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 28235 ENGINEER VIRGINIA T. SCHIAR 5/31/14

NORTH CAROLINA PROFESSIONAL SEAL 37830 ENGINEER MICHAEL P. BAREFOOT 05/31/14

512-08-054 JOB NO.	1"=20' SCALE
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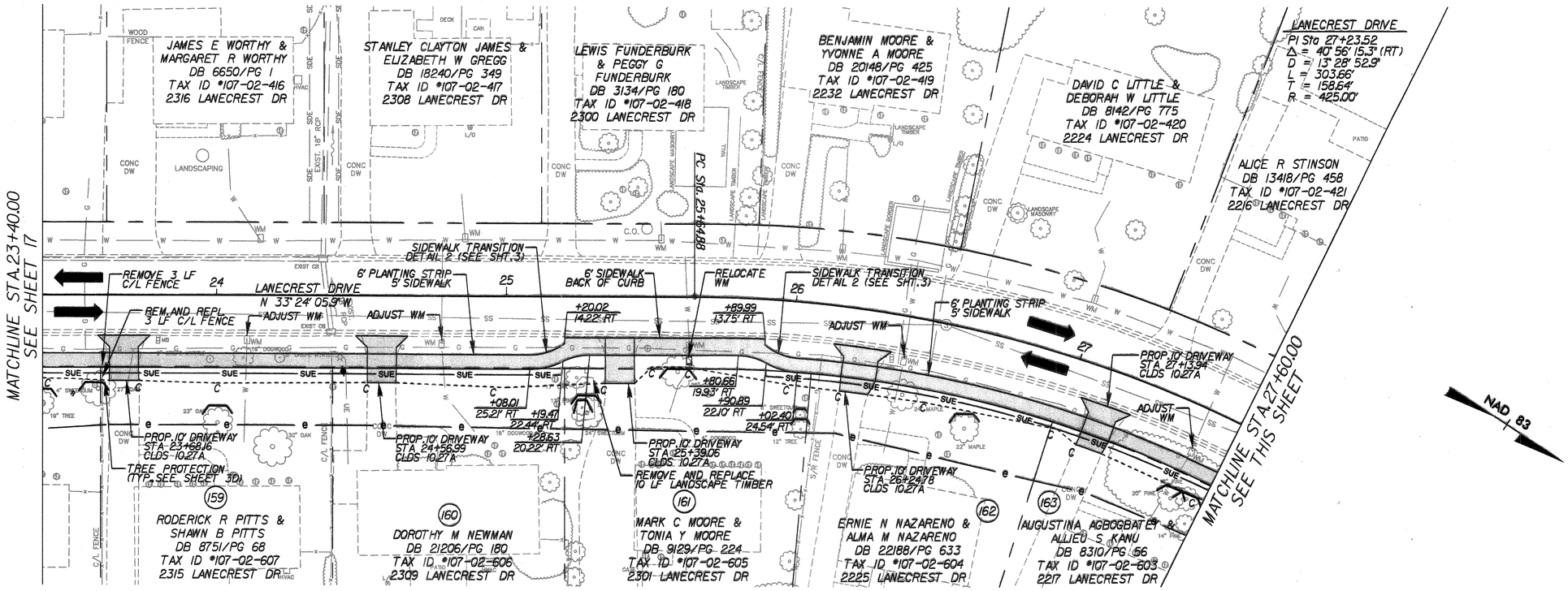
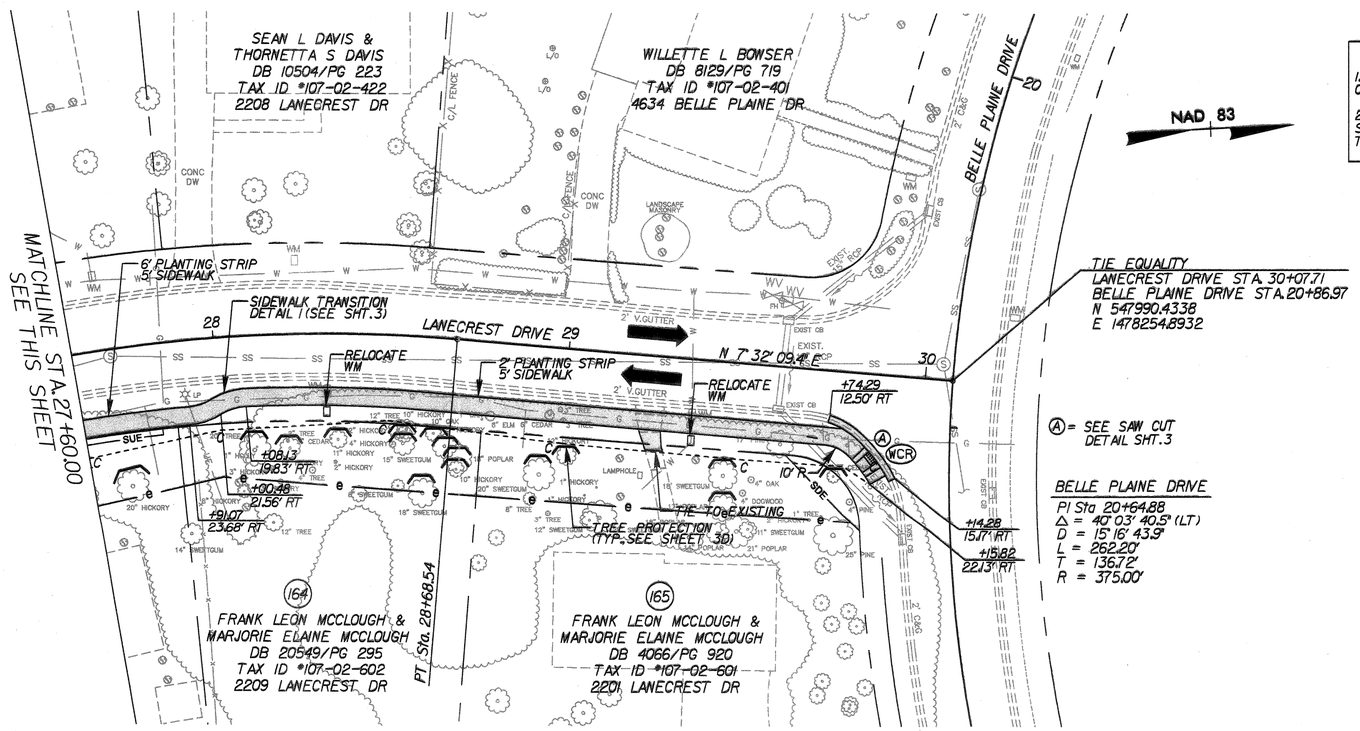
ABR PREPARED BY	DWB CHECKED BY
VYS APPROVED BY	MARCH 2014 DATE

HOPE VALLEY/OAK FOREST NEIGHBORHOOD IMPROVEMENT PROJECT

LANECREST DRIVE STA. 10+00.00 TO 15+00.00 & STA. 16+60.00 TO 21+50.00

SHEET 21 OF 23





ACCESSIBLE RAMP NOTES

1. FOR ACCESSIBLE RAMP DETAILS, USE CLDS 10.31A, 10.32A, 10.33A, 10.40A, 10.40B.

2. FOR ALL TRUNCATED DOMES, USE ONE SEAMLESS CONTINUOUS MAT EQUAL TO THE WIDTH OF THE SIDEWALK.

CHARLOTTE

Plans Prepared By:

ATKINS
5200 77 CENTER DRIVE, SUITE 500
CHARLOTTE, NC 28217
PHONE: (704) 522-7276
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 28235 ENGINEER VIRGINIA T. SCHAAF 3/31/14

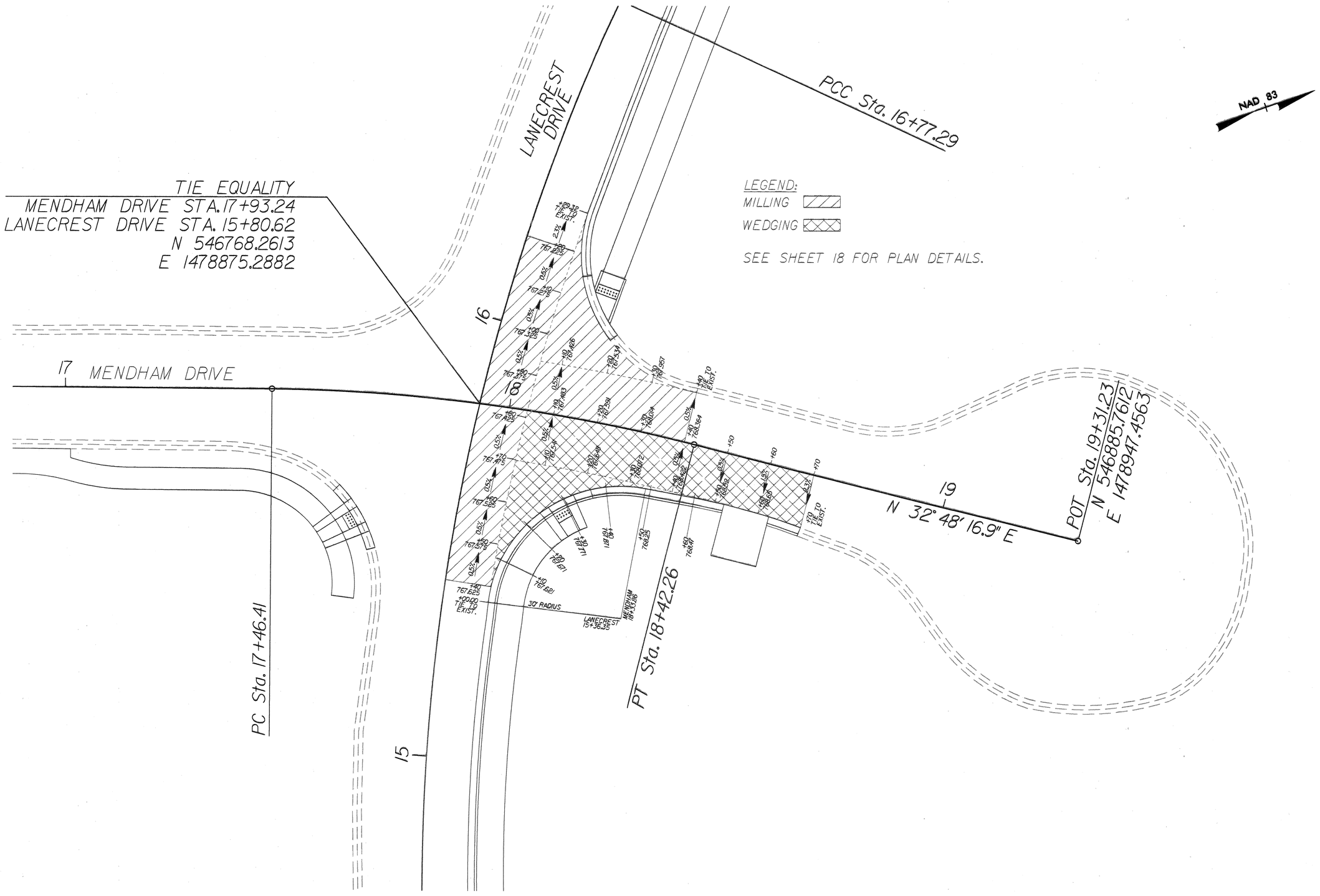
NORTH CAROLINA PROFESSIONAL SEAL 37880 ENGINEER MICHAEL P. BAREFOOT 3/31/14

512-09-054 JOB NO.	1"=20' SCALE
6x:\Transit\Court\Neighborhood\Hope Valley\Sheets\Plan\Hope Valley.pal02.dgn CAD FILE PATH	DWG
ABR PREPARED BY	CHECKED BY
VTS APPROVED BY	MARCH 2014 DATE

HOPE VALLEY/OAK FOREST NEIGHBORHOOD IMPROVEMENT PROJECT

LANECREST DRIVE STA. 23+40.00 TO 30+07.71

SHEET 22 OF 23



CHARLOTTE.

Plans Prepared By:

ATKINS
5200 77 CENTER DRIVE, SUITE 600
CHARLOTTE, N.C. 28217
PHONE: (704) 522-7275
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 28235 ENGINEER VIRGINIA T. SCHIAN
3/31/14

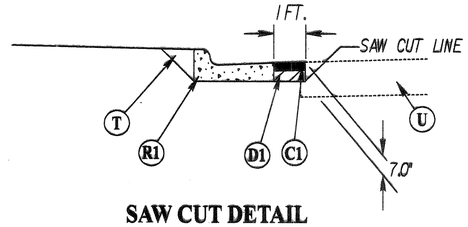
512-08-054 JOB NO.	1"=10' SCALE
26-MAR-2014 15:04 \\Transportation\Neighborhood\HopeValley\Sheets\1\Intersection Grading\HopeValley_25 Grading.dgn CAD FILE PATH	
ABR PREPARED BY	DWB CHECKED BY
VTS APPROVED BY	MARCH 2014 DATE

HOPE VALLEY/OAK FOREST NEIGHBORHOOD IMPROVEMENT PROJECT

LANECREST DRIVE AT MENDHAM DRIVE INTERSECTION GRADING

SHEET 23 OF 23

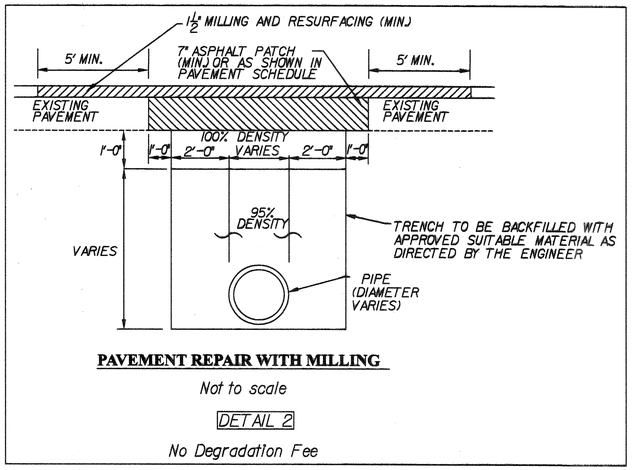
SAW CUT TO BE MADE 1.0 FT. FROM LIP OF PROPOSED CURB



SAW CUT DETAIL

PAVEMENT SCHEDULE

ITEM	DESCRIPTION
C1	PROP. APPROX. 3" ASPHALT CONC. SURFACE COURSE, TYPE S 9.5 B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF 2-1.5" LAYERS.
D1	PROP. APPROX. 4" ASPHALT CONC. INTERMEDIATE COURSE, TYPE 19.0 B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD. IN EACH OF 1-4" LAYERS.
R	EXISTING VALLEY GUTTER TO REMAIN
R1	2'-0" CURB AND GUTTER, NCDOT STD. 846.01
R2	VALLEY CURB AND GUTTER, NCDOT STD. 846.01
S	4" CONCRETE SIDEWALK, NCDOT STD. 848.01
T	EARTH MATERIAL
U	EXISTING PAVEMENT TO REMAIN

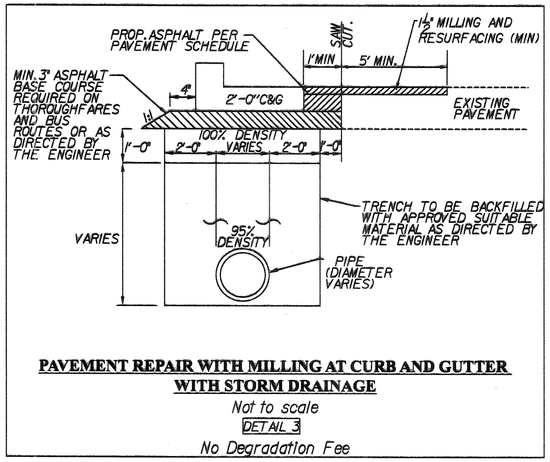


PAVEMENT REPAIR WITH MILLING

Not to scale

DETAIL 2

No Degradation Fee



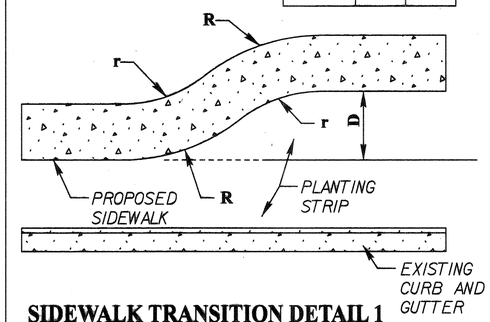
PAVEMENT REPAIR WITH MILLING AT CURB AND GUTTER WITH STORM DRAINAGE

Not to scale

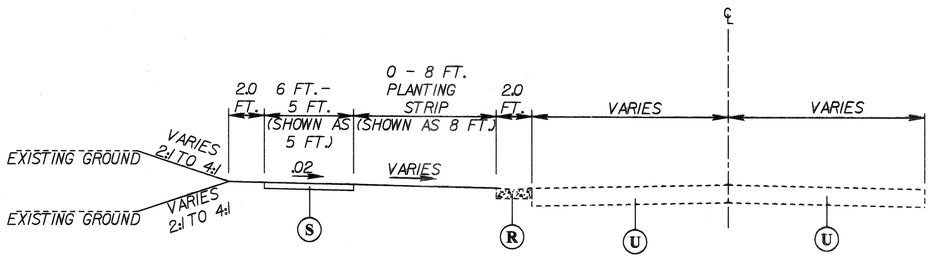
DETAIL 3

No Degradation Fee

D	R	r
0' - 2.9'	20'	15'
3' - 7.9'	20'	15'
8'+	50'	45'



SIDEWALK TRANSITION DETAIL 1



TYPICAL SECTION 1

COLEBROOK DRIVE
STA. 13+55.48 TO STA. 21+90.39
STA. 23+77.56 TO STA. 29+04.61
STA. 32+37.06 TO STA. 41+58.58

OAK FOREST DRIVE
STA. 10+22.46 TO STA. 14+00.00
STA. 20+38.66 TO STA. 29+94.29

SLAGLE DRIVE
STA. 10+34.51 TO STA. 19+21.57

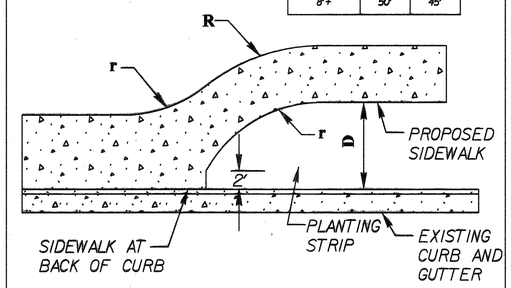
MARBETTA LANE
STA. 10+28.84 TO STA. 16+69.26

MEADOWCLIFF DRIVE
STA. 10+20.45 TO STA. 16+29.79
STA. 17+56.71 TO STA. 21+83.32
STA. 22+53.46 TO STA. 38+19.99

BRIARHILL DRIVE
STA. 10+22.19 TO STA. 19+48.12

BRIARGROVE DRIVE
STA. 10+19.31 TO STA. 29+52.26

D	R	r
0' - 2.9'	10'	5'
3' - 7.9'	25'	20'
8'+	50'	45'



SIDEWALK TRANSITION DETAIL 2

CHARLOTTE.

Plans Prepared By:

ATKINS
5200 77 CENTER DRIVE, SUITE 500
CHARLOTTE, N.C. 28277
PHONE: (704) 522-7275
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 28235 ENGINEER VIRGINIA T. SCHARR 3/31/14

NTS — SCALE

512-08-054 — JOB NO.

SE-MR-2014.1326
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CAD FILE PATH

DWB — CHECKED BY

MARCH 2014 — DATE

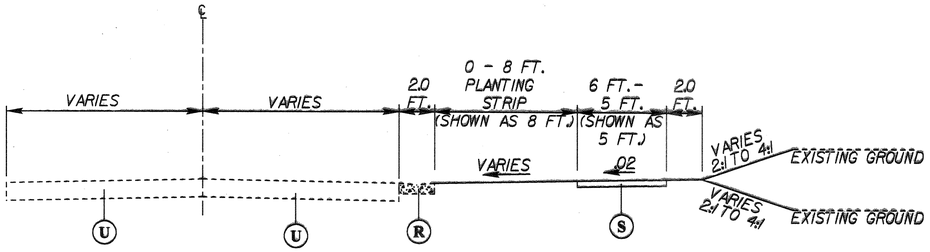
ABR — PREPARED BY

VTS — APPROVED BY

HOPE VALLEY/OAK FOREST NEIGHBORHOOD IMPROVEMENT PROJECT

TYPICAL SECTIONS

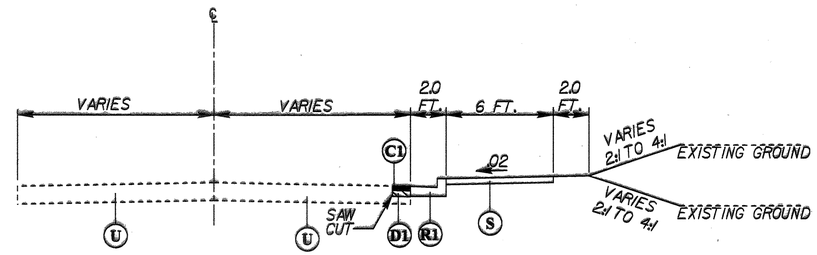
SHEET 3 OF 23



TYPICAL SECTION 2

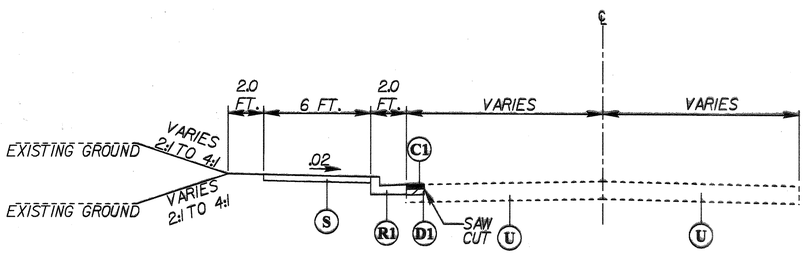
STEPPING STONE DRIVE
STA. 10+31.22 TO STA. 21+13.19
MENDHAM DRIVE
STA. 10+65.14 TO STA. 13+66.35
STA. 14+31.75 TO STA. 17+62.63
MALTA PLACE
STA. 10+28.34 TO STA. 13+22.52

LANECREST DRIVE
STA 10+30.55 TO STA. 14+23.66
STA 16+15.04 TO STA. 18+23.14
STA 19+42.57 TO STA. 29+74.29



TYPICAL SECTION 4

COLBY PLACE
STA. 10+53.44 TO STA. 13+13.30
STA. 13+72.57 TO STA. 16+59.72
LANECREST DRIVE
STA 14+33.97 TO STA. 15+45.12



TYPICAL SECTION 3

COLEBROOK DRIVE
STA. 10+28.66 TO STA. 13+45.58
STA. 22+39.13 TO STA. 23+67.06
STA. 29+90.21 TO STA. 31+83.94
STA. 41+68.08 TO STA. 43+56.57
OAK FOREST DRIVE
STA. 15+03.01 TO STA. 18+46.48
STA. 18+80.99 TO STA. 20+28.66

MARBETTA LANE
STA. 16+79.26 TO STA. 18+18.86
MEADOWCLIFF DRIVE
STA. 16+40.21 TO STA. 17+02.13
STA. 38+63.69 TO STA. 40+36.22

CHARLOTTE

Plans Prepared By:
ATKINS
5200 77 CENTER DRIVE, SUITE 500
CHARLOTTE, N.C. 28217
PHONE: (704) 522-7275
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 28235 ENGINEER VIRGINIA T. SCHAAR
3/31/14

512-08-054 JOB NO.
NTS SCALE
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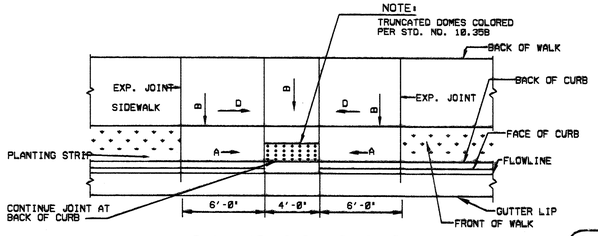
ABR PREPARED BY
DWB CHECKED BY
VTS APPROVED BY
MARCH 2014 DATE

HOPE VALLEY/OAK FOREST NEIGHBORHOOD IMPROVEMENT PROJECT

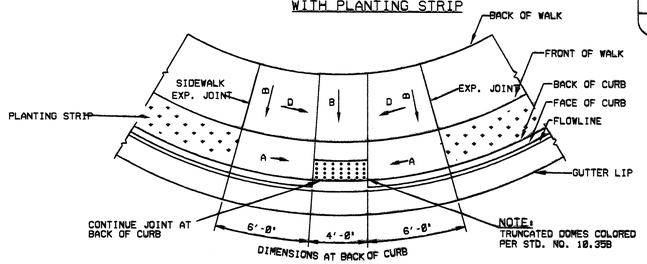
TYPICAL SECTIONS

SHEET 3A OF 23



PLAN VIEW-PARALLEL RAMP
WITH PLANTING STRIP

SLOPE 'A'	12:1
SLOPE 'B'	1/4"/FT
SLOPE 'D'	3/8"/FT

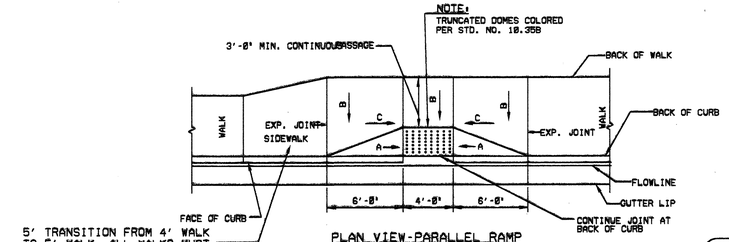


PLAN VIEW-DIAGONAL RAMP WITH PLANTING STRIP

CITY OF CHARLOTTE
LAND DEVELOPMENT STANDARDS
INCLUDES CHARLOTTE ETJ

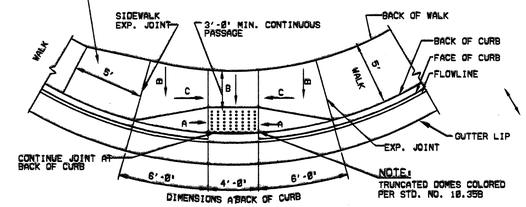
ACCESSIBLE RAMP STANDARD WITH PLANTING STRIP 2'-6" CURB AND GUTTER

STD. NO. 10.31A REV.



PLAN VIEW-PARALLEL RAMP
WITHOUT PLANTING STRIP

SLOPE 'A'	12:1
SLOPE 'B'	1/4"/FT
SLOPE 'C'	5/8"/FT

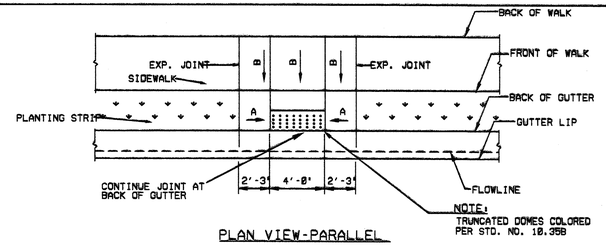


PLAN VIEW-DIAGONAL RAMP WITHOUT PLANTING STRIP

CITY OF CHARLOTTE
LAND DEVELOPMENT STANDARDS
INCLUDES CHARLOTTE ETJ

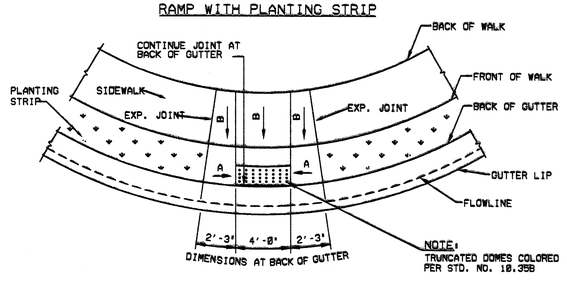
ACCESSIBLE RAMP STANDARD WITHOUT PLANTING STRIP 2'-6" CURB AND GUTTER

STD. NO. 10.32A REV.



PLAN VIEW-PARALLEL
RAMP WITH PLANTING STRIP

SLOPE 'A'	12:1
SLOPE 'B'	1/4"/FT

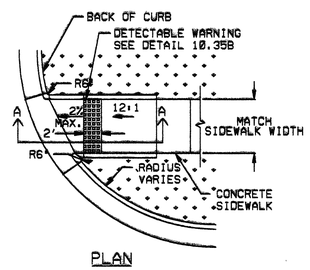


PLAN VIEW-DIAGONAL RAMP
WITH PLANTING STRIP

CITY OF CHARLOTTE
LAND DEVELOPMENT STANDARDS
INCLUDES CHARLOTTE ETJ

ACCESSIBLE RAMP STANDARD 2'-0" VALLEY GUTTER

STD. NO. 10.33A REV.



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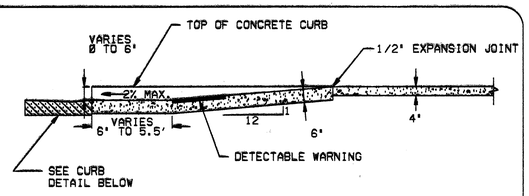
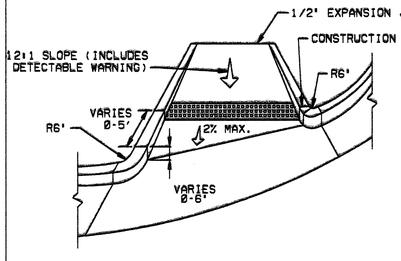
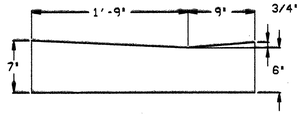


SECTION A-A



PERSPECTIVE



CURB DETAIL

NOTES:

1. USE THIS DETAIL ONLY UNDER THE FOLLOWING CIRCUMSTANCES:
   - 5-FOOT SIDEWALKS WITH CURB RADII OF 35 FEET OR LESS
   - 6-FOOT SIDEWALKS WITH CURB RADII OF 30 FEET OR LESS
   - 8-FOOT SIDEWALKS WITH CURB RADII OF 25 FEET OR LESS
2. DIRECTIONAL RAMPS MAY BE USED WHEN AN 8-FOOT PLANTING STRIP IS PROVIDED. DO NOT USE THIS DETAIL IF THERE IS HARDSCAPE INSTEAD OF A PLANTING STRIP.
3. ALL CONCRETE SHALL BE AT LEAST 3600 PSI.

CITY OF CHARLOTTE
LAND DEVELOPMENT STANDARDS
INCLUDES CHARLOTTE ETJ

DIRECTIONAL ACCESSIBLE RAMP WITH SMALL/MEDIUM CURB RADII

STD. NO. 10.40A REV. 4

CHARLOTTE

Plans Prepared By:

ATKINS
5200 77 CENTER DRIVE, SUITE 600
CHARLOTTE, N.C. 28217
PHONE: (704) 522-7275
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

NTS — SCALE
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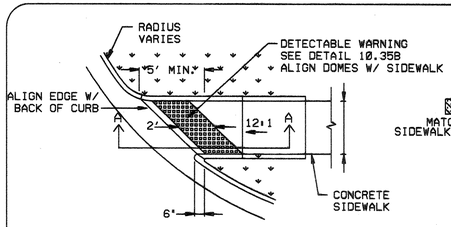
DWB — CHECKED BY
ABR — PREPARED BY
MARCH 2014 — DATE
VTS — APPROVED BY

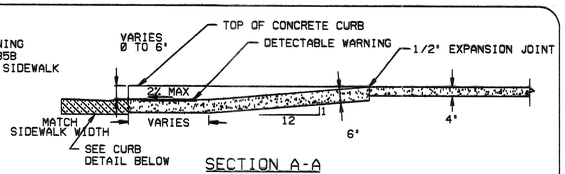
HOPE VALLEY/OAK FOREST NEIGHBORHOOD IMPROVEMENT PROJECT

ACCESSIBLE RAMP DETAILS

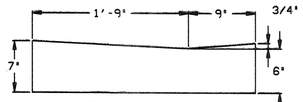
SHEET 3B OF 23



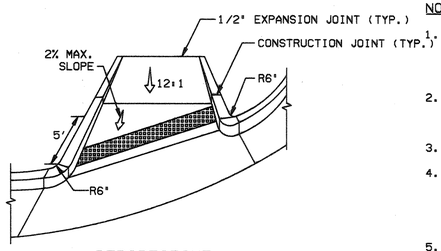
PLAN



SECTION A-A



CURB DETAIL



PERSPECTIVE

NOTES:

1. USE THIS DETAIL ONLY UNDER THE FOLLOWING CIRCUMSTANCES:
   - 5-FOOT SIDEWALKS WITH CURB RADII GREATER THAN 35 FEET
   - 6-FOOT SIDEWALKS WITH CURB RADII GREATER THAN 30 FEET
   - 8-FOOT SIDEWALKS WITH CURB RADII GREATER THAN 25 FEET
2. DIRECTIONAL RAMPS MAY BE USED WHEN A MIN. 8-FOOT PLANTING STRIP IS PROVIDED. DO NOT USE THIS DETAIL IF THERE IS HARDSCAPE INSTEAD OF A PLANTING STRIP.
3. ALL CONCRETE SHALL BE AT LEAST 3600 PSI.
4. THE ANGLES ON THE DETECTABLE WARNING WILL VARY WITH THE CURB RADIUS AND SIDEWALK WIDTH. IN THE CONFIGURATION SHOWN IN PLAN VIEW, ONE SIDE OF THE DETECTABLE WARNING TRAPEZOID SHALL BE LOCATED AT THE TOE OF THE 12:1 SLOPE, AND THE OTHER SIDE SHALL BE ALIGNED WITH THE CURB ON THE ACCESSIBLE RAMP.
5. THE TRUNCATED DOME PATTERN MUST ALIGN WITH THE SIDEWALK TO ALLOW WHEELCHAIRS TO PASS FREELY. DO NOT ALIGN DOME PATTERN WITH THE CURB RADIUS.

CHARLOTTE.	CITY OF CHARLOTTE LAND DEVELOPMENT STANDARDS INCLUDES CHARLOTTE ETJ	DIRECTIONAL ACCESSIBLE RAMP WITH LARGE CURB RADIUS	STD. NO. 10.40B	REV. 4

CHARLOTTE

Plans Prepared By:

ATKINS
5200 77 CENTER DRIVE, SUITE 500
CHARLOTTE, N.C. 28217
PHONE: (704) 522-7275
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

512-08-054 JOB NO.
NTS SCALE
26-MAR-2014 16:37
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CAD FILE PATH
ABR PREPARED BY
DWB CHECKED BY
VTS APPROVED BY
MARCH 2014 DATE

HOPE VALLEY/OAK FOREST NEIGHBORHOOD IMPROVEMENT PROJECT

ACCESSIBLE RAMP DETAILS

SHEET 3C OF 23

GENERAL NOTES:

TREES, SHRUBS AND HEDGES

THE CONTRACTOR IS REQUIRED TO REMOVE TREES, SHRUBS, AND HEDGES WITHIN THE EASEMENT LINES UNLESS SHOWN ON THE PLANS TO BE PROTECTED. THE CONTRACTOR SHALL ALSO PROTECT TREES AND SHRUBS OUTSIDE OF CUT/FILL LINES, IN ADDITION TO THOSE THAT RECEIVE TREES/SHRUB PROTECTION BARRIERS. WHEN ROOT PRUNING IS NECESSARY, CUT ROOTS CLEANLY USING A DISC TRENCHER IN ACCORDANCE WITH SECTION 01000 OF THE CITY OF CHARLOTTE LANDSCAPE CONSTRUCTION STANDARDS. PRUNING SHALL BE PER THE LATEST STANDARD OF THE LANDSCAPE CONSTRUCTION STANDARDS MANUAL (TYP.) USE PLYWOOD FORMS WHEN TREE ROOTS ARE ADJACENT TO PROPOSED CURB & GUTTER OR SIDEWALK. USE CLD STD. 40.11 FOR BRIDGING TREE ROOTS. TREES SPECIFIED BY THE PLANS TO HAVE ASPHALT CURBING MUST USE CLD STD. 40.13 TREE PROTECTION SHALL BE IN ACCORDANCE WITH CLD STD. 40.02. WHEN THE TREE IS CLOSE TO THE WORK AREA TREE PROTECTION CLD STD. 40.12 SHALL BE USED.

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

7-98

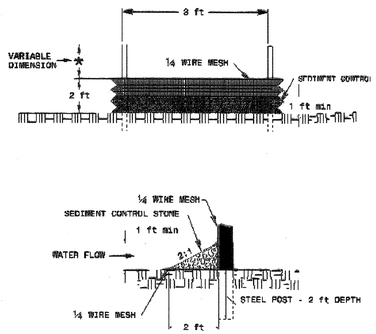
GENERAL NOTES:

USE NO. 5 OR NO. 57 STONE FOR SEDIMENT CONTROL.

USE HARDWARE CLOTH 24 GAUGE WIRE MESH WITH ¼ INCH MESH OPENINGS.

INSTALL 5 FT. SELF FASTENER ANGLE STEEL POST 2 FT. DEEP MINIMUM.

SPACE POST A MAXIMUM OF 3 FT.



ENGLISH STANDARD DRAWING FOR **SPECIAL SEDIMENT CONTROL FENCE**

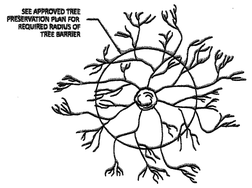
SHEET 1 OF 1 **1606.01**

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

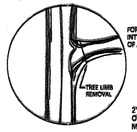
7-98

ENGLISH STANDARD DRAWING FOR **SPECIAL SEDIMENT CONTROL FENCE**

SHEET 1 OF 1 **1606.01**

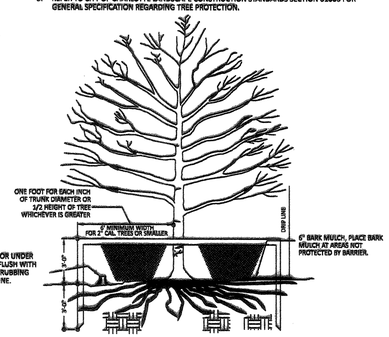


PLAN VIEW OF ROOT ZONE



NOTES:

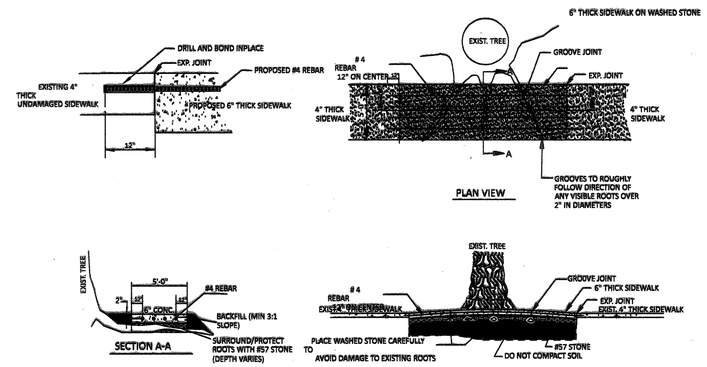
1. REMOVE ALL BARRIERS UPON COMPLETION OF PROJECT.
2. LANDSCAPING PLANS SHALL SHOW THE LOCATIONS OF ALL TREE PROTECTION FENCES.
3. REFER TO CITY OF CHARLOTTE LANDSCAPE CONSTRUCTION STANDARDS SECTION 01000 FOR GENERAL SPECIFICATION REGARDING TREE PROTECTION.



TEMPORARY TREE PROTECTION DETAIL

N.T.S. CLDSM STD. DTL. 40.02

DETAIL 40.02 -TREE PROTECTION DETAIL, SPECIFIES A CIRCULAR RADIUS FOR TREE PROTECTION BARRIER; HOWEVER, IF APPROVED BY THE ENGINEER, CHARLOTTE LANDSCAPE CONSTRUCTION STANDARD SECTION 01000 -TREE PRESERVATION, PART 03, D. ALLOWS FOR AN ASYMMETRICAL TREE PROTECTION BARRIER WHICH REMAINS A MINIMUM OF FOUR FEET FROM THE TRUNK AT ANY POINT AND ENCLOSES A UNDISTURBED CRITICAL ROOT ZONE AREA OF THE SAME AREA AS CALCULATED FOR THE SYMMETRICAL TREE PROTECTION BARRIER.



BRIDGING TREE ROOTS

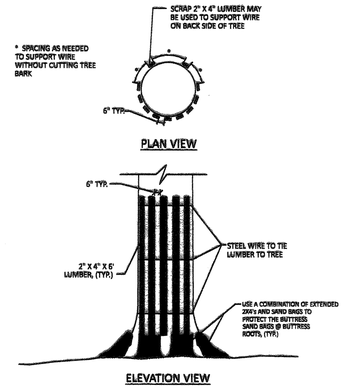
N.T.S. CLDSM STD. DTL. 40.11

NOTES:

1. INSTALL ANCHOR CHAIRS.

NOTES:

1. THIS TREE BUMPER DETAIL SHALL BE USED WHEN WORKING WITHIN 10' OF AN EXISTING TREE TO BE PROTECTED.
2. ALL TREES SHALL BE SAVED UNLESS NOTED OTHERWISE ON THE PLANS OR DIRECTED BY THE ENGINEER.
3. LUMBER, WIRE, AND SANDBAGS MAY BE REUSED AT OTHER TREES.
4. THE INTENT OF THIS DETAIL IS TO PROTECT EXISTING TREES FROM DAMAGE DURING CONSTRUCTION, ESPECIALLY FROM BACKHOE ARM SWING. AN ALTERNATE APPROACH MAY BE USED IF APPROVED IN WRITING BY THE ENGINEER AFTER CONSULTATION WITH THE CITY ARBORIST OR HIS DULY AUTHORIZED REPRESENTATIVE.

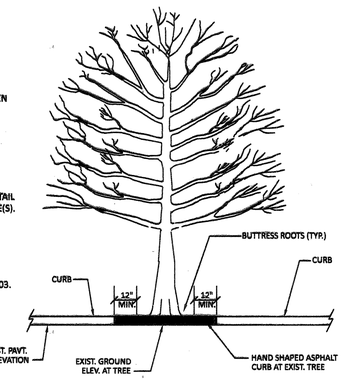


TEMPORARY TREE PROTECTION DETAIL

N.T.S. CLDSM STD. DTL. 40.12

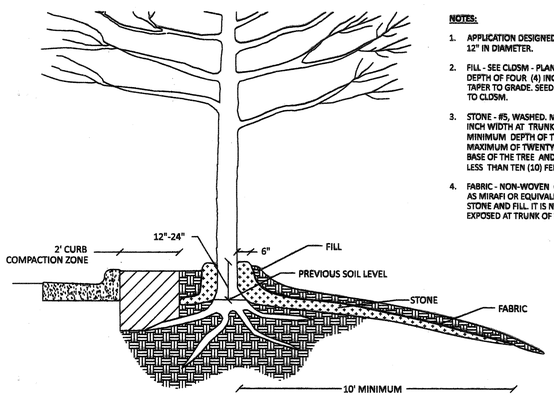
NOTES:

1. CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING NEAR EXISTING TREES.
2. WHERE EXISTING TREES ARE WITHIN 4' OF THE PROPOSED BACK OF CURB, THE PROPOSED CURB SHALL END A MINIMUM OF 12" FROM THE TREE'S BUTTRESS ROOTS.
3. CONTRACTOR SHALL COORDINATE WITH THE CITY ARBORIST TO IDENTIFY TREES FOR WHICH THIS DETAIL APPLIES PRIOR TO CONSTRUCTION NEAR THE TREE(S). NO TREES SHALL BE REMOVED UNLESS CLEARLY SPECIFIED ON THE PLANS OR IDENTIFIED BY THE ENGINEER.
4. AVOID FILL PLACEMENT NEAR TREE.
5. FOR ADDITIONAL SPECS., SEE SECTION 1000 PART 03. B AND C



ASPHALT CURB PLACEMENT AT EXISTING TREES

N.T.S. CLDSM STD. DTL. 40.13



NOTES:

1. APPLICATION DESIGNED FOR TREES NO LESS THAN 12" IN DIAMETER.
2. FILL - SEE CLDSM - PLANTING MIX. APPLY TO A DEPTH OF FOUR (4) INCHES AT BASE OF TREE, TAPER TO GRADE. SEED AND MULCH ACCORDING TO CLDSM.
3. STONE - #5, WASHED. MAINTAIN EXPOSED SIX (6) INCH WIDTH AT TRUNK OF TREE. PLACE TO MINIMUM DEPTH OF TWELVE (12) INCHES AND A MAXIMUM OF TWENTY-FOUR (24) INCHES AT THE BASE OF THE TREE AND TAPER OUTWARD TO NO LESS THAN TEN (10) FEET.
4. FABRIC - NON-WOVEN GEOTEXTILE FABRIC, SUCH AS MIRAFI OR EQUIVALENT, PLACED BETWEEN STONE AND FILL. IT IS NOT TO COVER STONE EXPOSED AT TRUNK OF TREE.

ROCK CHIMNEY

N.T.S. CLDSM STD. DTL. 40.14

CITY OF CHARLOTTE TREE PROTECTION

Revision: February 2011

CHARLOTTE

Plans Prepared By:

ATKINS
5200 77 CENTER DRIVE, SUITE 500
CHARLOTTE, N.C. 28217
PHONE: (704) 522-7275
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

512-08-0054 JOB NO.
08-MAR-2014 16:27 G:\Trees\Cdot\Neighborhood\Hope Valley\Sheets\Hlev\03b_Tree_protection_detail.dgn CAD FILE PATH
NTS SCALE
ABR PREPARED BY
VTS APPROVED BY
DWB CHECKED BY
MARCH 2014 DATE

HOPE VALLEY/OAK FOREST NEIGHBORHOOD IMPROVEMENT PROJECT

TREE PROTECTION DETAILS

SHEET 3D OF 23

DRAINAGE STRUCTURE TABLE

STRUCTURE NO.	STRUCTURE TYPE	STATION	OFFSET	GRATE/RIM ELEV.	INVERT IN	INVERT OUT	DEPTH	STRUCTURE STD. NO.	CASTING STD. NO.	GRATE TYPE	PIPE INFORMATION	SHEET NO.
201	CB	29+68.36 COLEBROOK	11.3' RT	719.15	--	715.65	3.50	NCDOT STD. 840.01	NCDOT STD. 840.03	F	55' OF 15" RCP @ 2.4%	6
202	DCB	10+40.70 STEPPING STONE	11.8' LT	740.73	--	738.32	2.41	CLDS 20.03	NCDOT STD. 840.03	E	EXISTING 15" RCP	12
203	CB	21+89.10 MEADOWCLIFF	12.2' LT	737.00	--	733.50	3.50	NCDOT STD. 840.01	NCDOT STD. 840.03	G	66' OF 15" RCP @ 5.7%	13
204	DCB	25+90.00 MEADOWCLIFF	11.3' LT	738.60	--	733.68	4.92	CLDS 20.03	NCDOT STD. 840.03	E	EXISTING 15" RCP	13
205	Removed											
206	CB	18+46.90 BRIARGROVE	12.0' RT	750.80	--	747.30	3.50	NCDOT STD. 840.01	NCDOT STD. 840.03	F	20' OF 15" RCP @ 5.3%	17
207	DCB	18+68.90 BRIARGROVE	11.9' RT	750.10	746.30 N 746.52 S	746.27	3.83	CLDS 20.03	NCDOT STD. 840.03	E	EXISTING 18" RCP	17
208	CB	22+02.00 LANECREST	11.9' RT	762.15	--	758.86	3.29	NCDOT STD. 840.01	NCDOT STD. 840.03	F	26' OF 15" RCP @ 0.5% (CLASS IV)	17
209	CB	18+28.49 LANECREST	12.0' RT	765.75	--	762.25	3.50	NCDOT STD. 840.01	NCDOT STD. 840.03	F	109' OF 15" RCP @ 1.0%	21
210	DI	11+81.28 MEADOWCLIFF	29.9' LT	736.50	--	732.75	3.75	NCDOT STD. 840.15	NCDOT STD. 840.16	--	129' OF 18" RCP @ 1.7%	12
211	DI	15+34.91 MEADOWCLIFF	29.6' LT	742.40	--	738.65	3.75	NCDOT STD. 840.15	NCDOT STD. 840.16	--	130' OF 18" RCP @ 1.8%	12
212	CB	10+49.00 MEADOWCLIFF	11.5' LT	734.05	730.54	730.54	3.51	NCDOT STD. 840.01	NCDOT STD. 840.03	F	49' OF 24" RCP @ 1.0%	6
213	CB	34+27.10 COLEBROOK	11.8' RT	734.61	730.02	729.92	4.69	NCDOT STD. 840.01	NCDOT STD. 840.03	G	24' OF 24" RCP @ 2.0%	6

DRAINAGE ITEM TOTALS

SHEET NO.	STRUCTURE STD. #				CASTING STD. #			GRATE TYPE			PIPE (LINEAR FEET)					COMMENTS
	840.01	840.15	840.51	20.03	840.03	840.16	840.54	E	F	G	15" RCP	15" RCP (CLASS IV)	18" RCP	24" RCP	PIPE REMOVAL	
4																
5																
6	3				5			2	2	1	55			73		
7																
8																
9																
10																
11					1					1						
12		2		1	2	2		2					259			
13	1			1	3			2		1	66					
14																
15																
16																
17	2			1	4			2	2		20	26				
18																
19																
20																
21	1				1				1		109					
22																
23																
24																
TOTALS	7	2	0	3	16	2	0	8	5	3	250	26	259	73	0	

NOTE: ALL PIPES ARE CLASS III UNLESS OTHERWISE NOTED.

KEY: CLDS - CHARLOTTE LAND DEVELOPMENT STANDARDS
NCDOT - NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARDS

CHARLOTTE

Plans Prepared By:

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NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 037808 ENGINEER MICHAEL P. BAREFOOT
03/31/14

NTS SCALE

512-08-054 JOB NO.

26-MAR-2014 09:51
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CAD FILE PATH

MJW PREPARED BY

MPB APPROVED BY

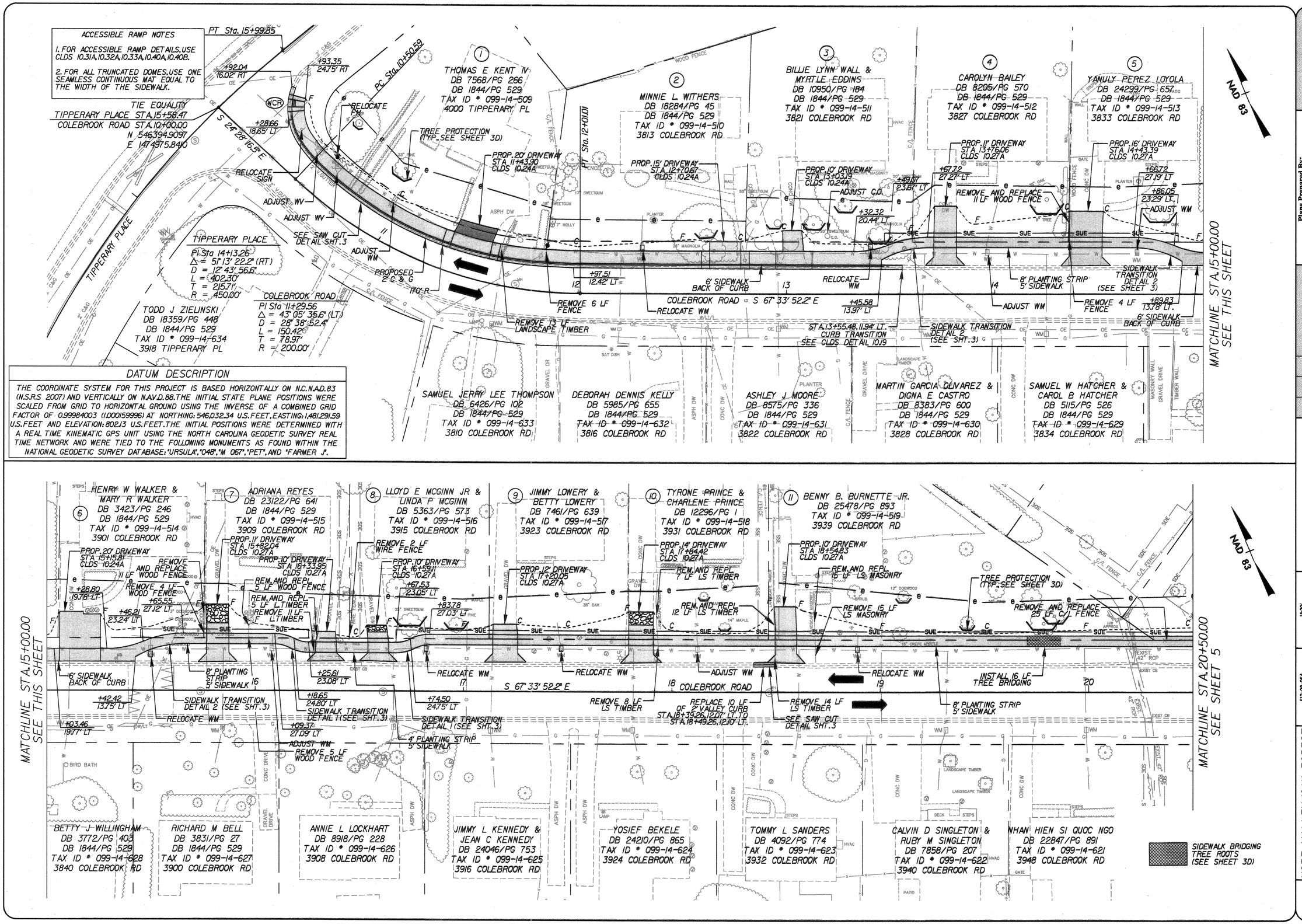
DBT CHECKED BY

MARCH 2014 DATE

HOPE VALLEY/OAK FOREST NEIGHBORHOOD IMPROVEMENT PROJECT

STORM DRAINAGE STRUCTURE SUMMARY

SHEET 3E OF 23



CHARLOTTE

Plans Prepared By:

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6200 77 CENTER DRIVE, SUITE 600
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PHONE: (704) 522-7275
NCBELS #F-0326

NO.	DATE	BY	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 28235 ENGINEER VIRGINIA T. SCHAAR 3/31/14

NORTH CAROLINA PROFESSIONAL SEAL 37830 ENGINEER MICHAEL P. BAREFOOT 03/31/14

1"=20'	SCALE
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DWB	CHECKED BY
MARCH 2014	DATE
512-08-054	JOB NO.
ABR	PREPARED BY
VTS	APPROVED BY

HOPE VALLEY/OAK FOREST NEIGHBORHOOD IMPROVEMENT PROJECT

COLEBROOK ROAD STA. 10+00.00 TO 20+50.00

SHEET 4 OF 23