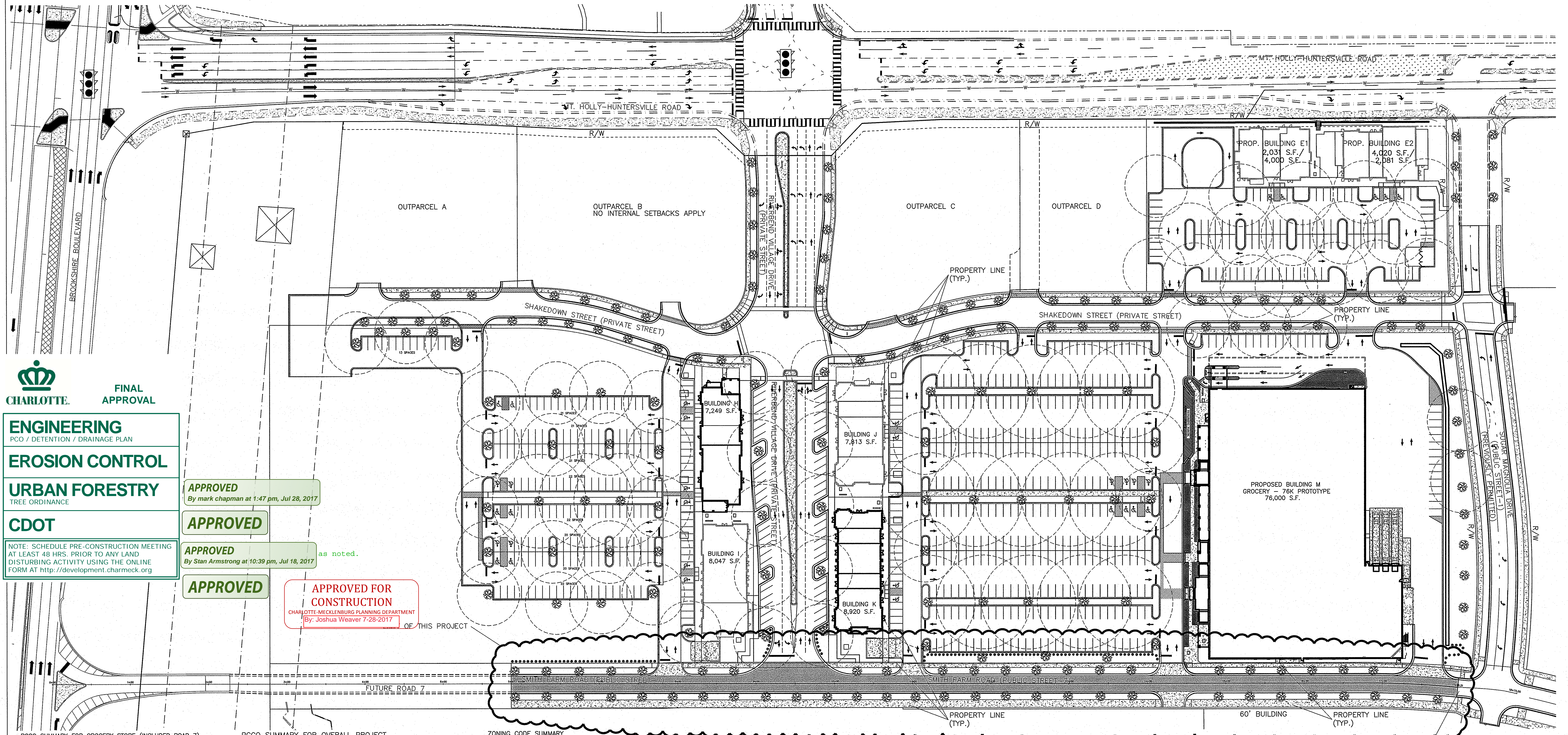
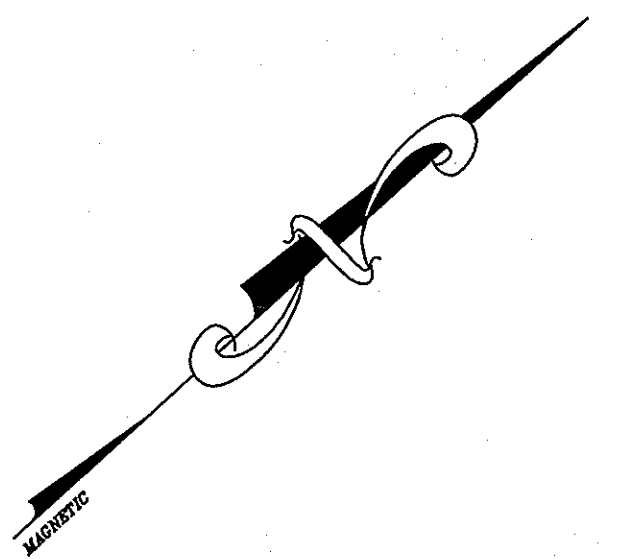
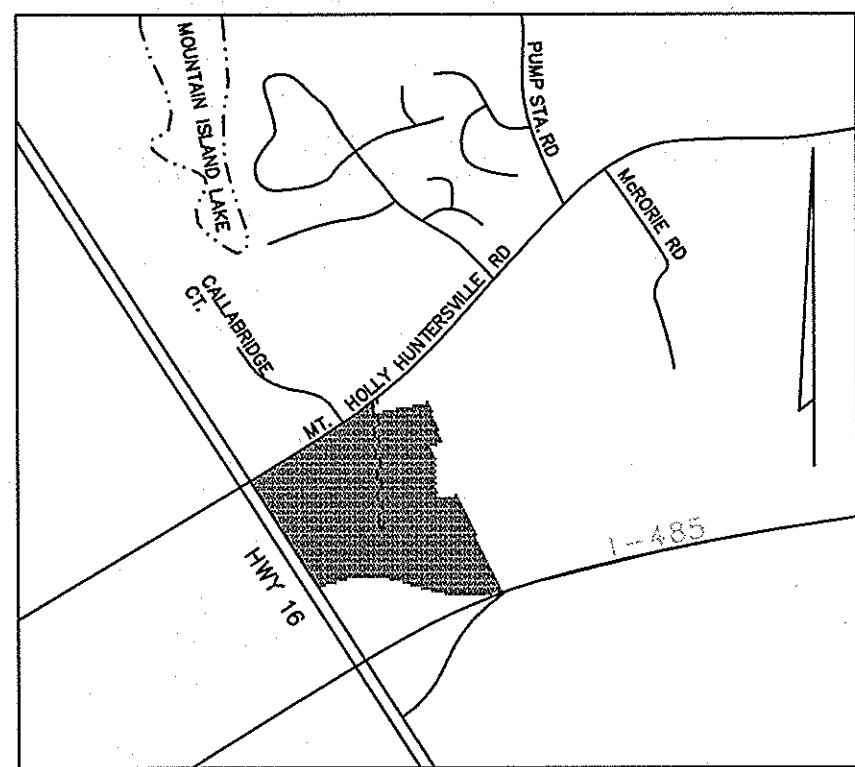


PUBLIC ROAD 7 AT RIVERBEND

REFERENCE: LDX-2016-00033, LDC-2016-00159, AND SDRC-2015-00078



CHARLOTTE
FINAL APPROVAL

ENGINEERING
PCO / DETENTION / DRAINAGE PLAN

EROSION CONTROL

URBAN FORESTRY
TREE ORDINANCE

CDOT

NOTE: SCHEDULE PRE-CONSTRUCTION MEETING AT LEAST 48 HRS. PRIOR TO ANY LAND DISTURBING ACTIVITY USING THE ONLINE FORM AT <http://development.charmeck.org>

APPROVED
By mark chapman at 1:47 pm, Jul 28, 2017

APPROVED

APPROVED
By Stan Armstrong at 10:39 pm, Jul 18, 2017 as noted.

APPROVED

APPROVED FOR CONSTRUCTION
CHARLOTTE-MECKLENBURG PLANNING DEPARTMENT
By: Joshua Weaver 7-28-2017

PCCO SUMMARY FOR GROCERY STORE (INCLUDED ROAD 7)

PCCO SUMMARY	
Original Parcel ID Number(s):	03304110 & 03304111
Development Type:	Commercial
Subject to PCO? Y/N	Yes
If NO, why?	Western Catawba
Disturbed Area (ac):	107
Site Area (ac):	118.73 - 114.59 After RW Dedication
DA#1	DA#2
Total on-site Drainage Area (ac):	113.1
Existing Built-upon area (SF):	0
Existing BUA to be removed (SF):	0
Existing BUA to remain (SF):	0
Proposed New BUA (SF):	717,190
Proposed % BUA:	15
Density (High/Low):	High
Total Post-Project BUA for site:	717,190 S.F.
Development or Redevelopment?	Development
Natural Area Required (ac):	11.87
Natural Area provided, total (ac):	17.88
Undisturbed/Treed Natural Area Preserved (ac):	11.76
Total stream buffer protected on-site (ac):	No
Transit Station Area? Y/N	No
Distressed Business District? Y/N	No
Mitigation Type (if applicable):	N/A
Natural Area mitigation? Y/N	No
Buffer Mitigation? Y/N	No
Total Phosphorous Mitigation? Y/N	No

PCCO SUMMARY FOR OVERALL PROJECT

PCCO SUMMARY	
Original Parcel ID Number(s):	03304110 & 03304111
Development Type:	Commercial
Subject to PCO? Y/N	Yes
If NO, why?	Western Catawba
Disturbed Area (ac):	107
Site Area (ac):	118.73 - 114.59 After RW Dedication
DA#1	DA#2
Total on-site Drainage Area (ac):	113.1
Existing Built-upon area (SF):	0
Existing BUA to be removed (SF):	0
Existing BUA to remain (SF):	0
Proposed New BUA (SF):	3,447,774
Proposed % BUA:	70
Density (High/Low):	High
Total Post-Project BUA for site:	3,447,774 S.F.
Development or Redevelopment?	Development
Natural Area Required (ac):	11.87
Natural Area provided, total (ac):	17.88
Undisturbed/Treed Natural Area Preserved (ac):	11.76
Total stream buffer protected on-site (ac):	No
Transit Station Area? Y/N	No
Distressed Business District? Y/N	No
Mitigation Type (if applicable):	N/A
Natural Area mitigation? Y/N	No
Buffer Mitigation? Y/N	No
Total Phosphorous Mitigation? Y/N	No

ZONING CODE SUMMARY

PROJECT NAME:	GROCERY STORE AT RIVERBEND
ADDRESS:	3850 MT. HOLLY-HUNTERSVILLE ROAD
PLANS PREPARED BY:	THE ISAACS GROUP, P.C.
PHONE #:	704-527-3440
ZONING:	NC-SPA
REZONING:	2018-128
JURISDICTION:	CITY OF CHARLOTTE
TAX PARCEL #:	03304110
PROPOSED USE:	COMMERCIAL
LOT SIZE:	8,171,878/118.73 SQ. FEET/ACRES (INCLUDES R/W DEDICATION)
DISTURBED/CONSTRUCTION AREA:	4,864,922/110.13 SQ. FEET/ACRES
PROPOSED IMPERVIOUS AREA:	3,447,774/79.15 SQ. FT/ACRES
PROPOSED IMPERVIOUS AREA (GROCERY STORE PLAN):	288,674/6.17 SQ. FT/ACRES
NO PROPOSED PARKING WITH THIS PROJECT	

Wetpond Designed For 79.15 acres of Impervious				
OUTPARCEL	Total Site (AC)	Estimated Impervious %	Estimated Area	Permitted Area
A	1.1	80%	0.88	
B	1.48	80%	1.18	
C	1.3	80%	1.04	
D	0.82	80%	0.65	
E	1.59	80%	1.27	1.5
F	1.3	80%	1.04	
COMMERCIAL PHASE 1	18.9	92.50%	17,485	14.98
COMMERCIAL PHASE 2	12.5	92.50%	11,665	
OFFICE	17.5	60%	14	
MULTIFAMILY	34.2	70%	23.94	
TOWNHOME	3.3	70%	2.31	
MT. HOLLY-HUNT.	0.97	100%	0.87	
PUBLIC RD 1	0.98	100%	0.98	0.90
PUBLIC RD 2	1.2	100%	1.2	1.2
	97.38		78.789	18.62

SHEET INDEX:

SHEET C0.0	COVER SHEET
SHEET C0.1	PROJECT NOTES
SHEET C1.0	SITE/STRIPE PLAN
SHEET C2.0	TREE SAVE PLAN
SHEET C2.1	LANDSCAPE PLAN
SHEET C3.0	PUBLIC ROAD 7 PROFILE
SHEET C3.1	PUBLIC ROAD 7 STORM
SHEET C4.0	EROSION CONTROL PLAN
SHEET C5.0	DETAILS

PROJECT NARRATIVE:

THE PURPOSE OF THIS PLAN IS TO PERMIT ROAD 7 AS A PUBLIC STREET. THIS ONLY INCLUDES THE PORTION OF ROAD 7 SHOWN. THERE WILL BE A SECOND SUBMITTAL THAT INCLUDES THE SECTION OF PUBLIC ROAD 7 THAT CONNECTS TO BROOKSHIRE BOULEVARD.

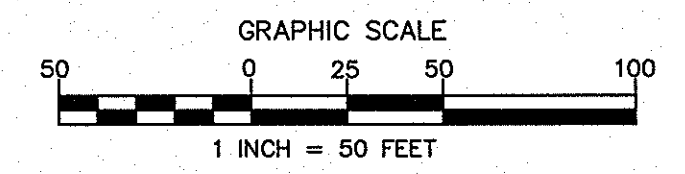
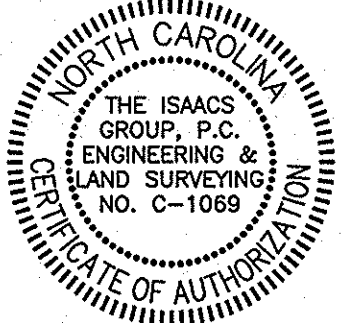
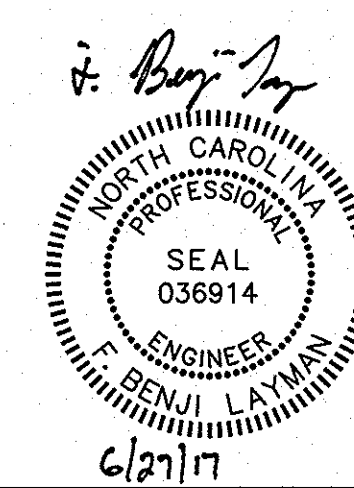
LEGEND

ROAD 7 LIMIT WITH THIS SUBMITTAL

PREVIOUSLY PERMITTED

PROPOSED CONCRETE

NOTE: REGIONAL STORMWATER BASIN PROVIDED AS APPROVED ON THE RIVERBEND COMMERCIAL PLAN, CITY OF CHARLOTTE RECORD #SDRC-2015-00078



NO.	BY	DATE	REVISION
1	FBL	5/27/17	PER CITY COMMENTS

Project:	PUBLIC ROAD 7 AT RIVERBEND
Title:	COVER SHEET
File #:	15023-P80W6
Date:	5/12/17
Project Egr:	FBL
Design By:	FBL
Drawn By:	FBL
Scale:	1"=50'
8720 RED OAK BOULEVARD, SUITE 420	
CHARLOTTE, N.C. 28217	
PHONE (704) 527-3440	FAX (704) 527-8335
THE ISAACS GROUP, P.C.	
ENGINEERING & SURVEYING	
NO. C-1069	
CIVIL ENGINEERING DESIGN AND SURVEYING	
C0.0	

CDDOT NOTES:

1. THE DEVELOPER SHALL CONTACT THE CHARLOTTE DEPARTMENT OF TRANSPORTATION (GUS JORDI, 704-336-7086) TO IDENTIFY ANY CONFLICTS WITH TRAFFIC SIGNALIZATION EQUIPMENT. 60-90 DAYS WILL BE REQUIRED TO COORDINATE RELOCATION. DEVELOPER SHALL BE RESPONSIBLE FOR ALL RELATED RELOCATION COST AND/OR ANY REPAIR COST CAUSED BY THE CONTRACTOR/DEVELOPER.
2. CERTIFICATION AND STREET CUDT PERMITS ARE REQUIRED FOR UTILITY CUTS ON CITY STREETS. ALLOW 7 DAYS PROCESSING FOR PERMIT. FOR INFORMATION CONTACT CHARLOTTE DEPARTMENT OF TRANSPORTATION (704-336-4025) OR VISIT [HTTP://WWW.CHARMECK.ORG/DEPARTMENTS/TRANSPORTATION/STREET-MAINTENANCE/HOME.HTM](http://www.charmeck.org/departments/transportation/street-maintenance/home.htm).
3. NON-STANDARD ITEMS (I.E. PAVERS, IRRIGATION SYSTEMS, ETC.) IN THE RIGHT-OF-WAY REQUIRE A RIGHT-OF-WAY ENCROACHMENT AGREEMENT WITH THE CHARLOTTE DEPARTMENT OF TRANSPORTATION/NORTH CAROLINA DEPARTMENT OF TRANSPORTATION BEFORE INSTALLATION. FOR CITY OF CHARLOTTE MAINTAINED STREETS, CONTACT CDDOT AT 704-336-3888.
4. ANY WORK WITHIN THE CITY'S R/W THAT REQUIRES CLOSURE OF THE SIDEWALK OR TRAVEL LANE FOR LESS THAN 30 DAYS REQUIRES A R/W USE PERMIT. TRAFFIC CONTROL PLANS FOR ANY SIDEWALK OR TRAVEL LANE CLOSURES MUST BE SUBMITTED AS PART OF THE R/W USE PERMIT REQUEST. TRAFFIC CONTROL PLANS MUST BE IN ACCORDANCE WITH CDDOT'S WATER AND TRAFFIC CONTROL HANDBOOK (WATCH) AND MUST BE REVIEWED AND APPROVED. CONTRACTOR SHALL CONTACT CDDOT AT LEAST 5 BUSINESS DAYS IN ADVANCE OF BEGINNING WORK AT 704-432-1562.
5. CONSTRUCTION STAGING WITHIN CITY R/W LASTING MORE THAN 30 DAYS REQUIRES A R/W LEASE AGREEMENT. CONTRACTOR SHALL CONTACT CDDOT AT 704-432-2592.
6. RIGHT-OF-WAY CLOSURES LONGER THAN 30 DAYS REQUIRE A R/W LEASE AGREEMENT WHICH WILL INCLUDE THE SUBMITTAL OF A TRAFFIC CONTROL PLAN. TRAFFIC CONTROL PLANS REQUIRED THROUGH A LEASE AGREEMENT MAY BE DIFFERENT FROM THE ONE REQUIRED DURING THE LAND DEVELOPMENT PLAN REVIEW AND ARE SUBJECT TO REVISIONS. THE REVISION TRAFFIC CONTROL PLANS MUST BE SUBMITTED AS PART OF THE LEASE AGREEMENT PROCESS FOR APPROVAL PRIOR TO START R/W CLOSURES. CONTRACTOR SHALL CONTACT CDDOT AT 704-336-2562.

NOTES:

1. THIS MAP IS NOT A CERTIFIED SURVEY. BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY THE ISAACS GROUP, P.C. FIELD WORK WAS PERFORMED ON JUNE 21, 2015.
2. THE UTILITIES SHOWN ARE FOR THE CONTRACTOR'S CONVENIENCE ONLY. THERE MAY BE OTHER UTILITIES NOT SHOWN ON THIS PLAN. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE LOCATIONS SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION. CONFLICTS BETWEEN EXISTING UTILITIES AND PROPOSED EXCAVATION SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
3. PROVIDE MINIMUM OF 48 HOUR NOTICE TO OWNER OR REPRESENTATIVE PRIOR TO INTERRUPTION OF ANY EXISTING UTILITY. IF BEING UTILIZED.
4. THE CONTRACTOR IS RESPONSIBLE FOR REPAIR AND/OR REPLACEMENT OF ANY UTILITIES DAMAGED DURING CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR LOCATION AND PROTECTION OF EXISTING ABOVE AND BELOW GROUND UTILITIES AND STRUCTURES. ANY AND ALL MANHOLES OR INDIVIDUAL SERVICES PRESENTLY IN SERVICE WHICH ARE DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED IMMEDIATELY AT NO ADDITIONAL EXPENSE TO THE UTILITY OWNER. ANY AND ALL MAINS OR INDIVIDUAL SERVICES PRESENTLY NOT IN SERVICE AND WHICH ARE TO BE REPLACED DURING THE COURSE OF CONSTRUCTION MAY BE REMOVED AND LEGALLY DEPOSED OF IF DAMAGED DURING CONSTRUCTION.
5. THE CONTRACTOR SHALL USE EXTREME CARE WHEN WORKING NEAR ALL UNDERGROUND AND OVERHEAD UTILITIES.
6. HANDICAP SIGNAGE TO BE INSTALLED IN ACCORDANCE WITH A.D.A STANDARDS AT H/C PARKING SPACES SHOWN.
7. ALL DIMENSIONS ARE TO BACK OF CURB UNLESS OTHERWISE NOTED.
8. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL NECESSARY PERMITS AND APPROVALS HAVE BEEN OBTAINED PRIOR TO CONSTRUCTION. THESE PERMITS AND APPROVALS MAY INCLUDE BUT ARE NOT LIMITED TO GRADING, DEMOLITION, ZONING, BUILDING, DRIVEWAY, DETENTION, SUBDIVISION, SPECIAL USE, SEWER AND WATER.
9. CONTACT THE UTILITY COMPANY TO RELOCATE ANY EXISTING UTILITY POLES. ALL EXISTING UTILITIES WHICH CONFLICT WITH THE IMPROVEMENTS UNDER THE SCOPE OF THIS PROJECT MUST BE RELOCATED AT THE EXPENSE OF THE APPLICANT.
10. ALL DEVELOPMENT CREATING A TOTAL OF 20,000 SQUARE FEET OF IMPERVIOUS AREA SINCE SEPTEMBER 1978 WILL REQUIRE STORM DRAINAGE DETENTION.
11. TREES WITHIN THE STREET RIGHT OF WAY ARE PROTECTED BY LAW. A PERMIT IS REQUIRED FROM THE CITY ARBORIST AT (704)-336-4262 PRIOR TO THE REMOVAL OF ANY RIGHT OF WAY TREES. ALL TREES OVER 8" IN DIAMETER AS MEASURED 4.5' ABOVE GROUND AND LOCATED WITHIN THE SETBACK ARE PROTECTED BY LAW. CONTACT LAND DEVELOPMENT AT (704)-336-6692 FOR REQUIRED PERMITS.
12. BEFORE YOU DIG STOP. CALL THE NO-CALL CENTER AT 1-800-632-4649. "IT'S THE LAW."
13. THE DEVELOPER SHALL CONTACT THE CHARLOTTE DEPARTMENT OF TRANSPORTATION (GUS JORDI, 704-336-7086) TO IDENTIFY ANY CONFLICTS WITH TRAFFIC SIGNALIZATION EQUIPMENT. 60-90 DAYS WILL BE REQUIRED TO COORDINATE RELOCATION. DEVELOPER SHALL BE RESPONSIBLE FOR ALL RELOCATION COST AND/OR ANY REPAIR COST CAUSED BY THE CONTRACTOR/DEVELOPER.
14. NO LIGHT/UTILITY POLES TO BE PLACED IN TREE ISLANDS.
15. THE PURPOSE OF THE STORM DRAINAGE EASEMENT IS TO PROVIDE STORM WATER CONVEYANCE. BUILDINGS ARE NOT PERMITTED IN THE EASEMENT AREA. ANY OTHER OBJECTS WHICH IMPED STORMWATER FLOW OR SYSTEM MAINTENANCE ARE ALSO PROHIBITED.
16. APPROVAL OF THIS PLAN IS NOT AN AUTHORIZATION TO GRADE ADJACENT PROPERTIES. WHEN FIELD CONDITIONS WARRANT OFF-SITE GRADING, PERMISSION MUST BE OBTAINED FROM THE AFFECTED PROPERTY OWNERS.
17. IN ORDER TO ENSURE PROPER DRAINAGE, KEEP A MINIMUM OF 0.5% SLOPE ON THE CURB.
18. HIGH-DENSITY POLYETHYLENE (HDPE) STORM DRAINAGE PIPE INSTALLED WITHIN EXISTING OR PROPOSED PUBLIC STREET RIGHT-OF-WAY MUST BE APPROVED BY THE CITY'S INSPECTOR PRIOR TO ANY BACKFILL BEING PLACED. BACKFILL MATERIAL MUST BE APPROVED BY THE CITY INSPECTOR PRIOR TO PLACEMENT OF THE MATERIAL WITHIN THE PUBLIC STREET RIGHT-OF-WAY.

SITE PREPARATION:

PRIOR TO CONSTRUCTION, THE PROPOSED CONSTRUCTION AREA SHOULD BE STRIPPED OF TOPSOIL, ORGANIC MATERIAL, EXISTING UNDOCUMENTED FILL AND OTHER SOFT OR UNSUITABLE MATERIAL. UPON COMPLETION OF STRIPPING OPERATIONS, THE EXPOSED SUBGRADE IN AREAS TO RECEIVE FILL SHOULD BE PROTECTED WITH A LOADED DUMP TRUCK OR SIMILAR PNEUMATIC-TYRED VEHICLE HAVING A LOADED WEIGHT OF APPROXIMATELY 25 TONS. AFTER EXCAVATION, THE EXPOSED SUBGRADES IN CUT AREAS SHOULD BE SIMILARLY PROTECTED.

PROFILING OPERATIONS SHOULD BE PERFORMED UNDER THE OBSERVATION OF A GEOTECHNICAL ENGINEER OR HIS AUTHORIZED REPRESENTATIVE. THE PROFILING SHOULD CONSIST OF TWO (2) COMPLETE PASSES OF THE EXPOSED AREAS, WITH EACH PASS BEING IN A DIRECTION PERPENDICULAR TO THE PRECEDING ONE. ANY AREAS WHICH REFLECT RUT OR PUMP DURING THE PROFILING, AND FAIL TO BE REMOVED WITH SUCCESSFUL PASSES, SHOULD BE UNDERCUT TO SUITABLE SOILS AND BACKFILLED WITH COMPACTED FILL.

THE ABILITY TO DRY WET SOILS, AND THEREFORE THE ABILITY TO USE THEM FOR FILL, WILL LIKELY BE ENHANCED IF EARTHWORK IS PERFORMED DURING SUMMER OR EARLY FALL. IF EARTHWORK IS PERFORMED DURING WINTER OR AFTER APPRECIABLE RAINFALL, THEN FILL MAY BE UNSTABLE DUE TO WET SOIL CONDITIONS, WHICH COULD INCREASE THE AMOUNT OF UNDERCUTTING REQUIRED. DRYING OF WET SOILS, IF ENCOUNTERED, MAY BE ACCOMPLISHED BY SPREADING AND DISCING OR BY OTHER MECHANICAL OR CHEMICAL MEANS.

IF EXCAVATIONS IN PORTIONS OF THE SITE ENCOUNTER VERY DENSE SOILS, PARTIALLY WEATHERED ROCK, OR BORINGS AND/OR ADDITIONAL TESTING SHOULD UNDER OWNER'S APPROVAL BE PERFORMED TO FURTHER IDENTIFY DEPTH TO PARTIALLY WEATHERED ROCK AND ROCK.

EXISTING ISOLATED Boulders IN THE SOIL MATRIX OR ERRATIC ROCK CONDITIONS CAN SOMETIMES REMAIN UNDETECTED DURING FIELD EXPLORATION. IT IS RECOMMENDED THAT EQUIPMENT CAPABLE OF HEAVY EXCAVATION BE USED DURING GRADING ACTIVITIES. STORM WATER PUMPING PLANS SHOULD TAKE INTO ACCOUNT THE EXISTENCE OF DENSE MATERIALS AND ROCK PRIOR TO CONSTRUCTION.

PARTIALLY WEATHERED ROCK CAN SOMETIMES BE EXCAVATED WITHOUT BLASTING. IN MASS EXCAVATION FOR GENERAL SITE WORK, DENSE SOILS AND PARTIALLY WEATHERED ROCK CAN USUALLY BE REMOVED BY RIPPING WITH A SINGLE-TOOTH RIPPER ATTACHED TO A LARGE CRAWLER TRACTOR OR BY BREAKING IT OUT WITH A LARGE FRONT-END LOADER. SUBSURFACE MATERIALS WITH A STANDARD PENETRATION RESISTANCE VALUE OF 50/6, 50/5, AND 50/4 INCHES OF PENETRATION CAN LIKELY BE LOOSENED AND RIPPED AS NOTED ABOVE.

IN CONFINED EXCAVATIONS SUCH AS FOUNDATIONS, UTILITY TRENCHES, ELEVATOR PITS, ETC., REMOVAL OF PARTIALLY WEATHERED ROCK MAY REQUIRE USE OF HEAVY DUTY BACKHOES (SUCH AS A JOHN DEER 1200C OR EQUIVALENT EXCAVATOR EQUIPPED WITH ROCK TEETH), PNEUMATIC SPADES, OR LIGHT BLASTING. THE COST OF EXCAVATION DEPENDS ON THE QUALITY OF GRADING EQUIPMENT, SKILL OF THE EQUIPMENT OPERATORS AND GEOLOGICAL STRUCTURE OF THE MATERIAL ITSELF, SUCH AS THE DIRECTION OF BEDDINGS, PLANES OF WEAKNESS AND SPACING BETWEEN DISCONTINUITIES. THEREFORE, A CONSERVATIVE APPROACH CONCERNING BUDGET ESTIMATES FOR UTILITY AND STORM WATER POND EXCAVATIONS IS RECOMMENDED. SUBSURFACE MATERIAL THAT EXHIBITED A STANDARD PENETRATION RESISTANCE VALUE OF 50/5, 50/2, AND 50/4 INCHES OF PENETRATION OR LESS WILL LIKELY REQUIRE BLASTING FOR REMOVAL.

RIP ROCK: ANY MATERIAL THAT CANNOT BE REMOVED BY SCRAPPERS, LOADERS, PANS, DOZERS, OR GRADERS, AND REQUIRES THE USE OF A SINGLE-TOOTH RIPPER MOUNTED ON A CRAWLER TRACTOR HAVING A MINIMUM DRAW BAR PULL RATED AT NOT LESS THAN 50,000 POUNDS.

BLAST ROCK: ANY MATERIAL WHICH CANNOT BE EXCAVATED WITH A SINGLE-TOOTH RIPPER MOUNTED ON A CRAWLER TRACTOR HAVING A MINIMUM DRAW BAR PULL RATED AT NOT LESS THAN 50,000 POUNDS (CATERPILLAR 0-8 OR EQUIVALENT) OR BY A CATERPILLAR 977 FRONT-END LOADER OR EQUIVALENT, AND OCCUPYING AN ORIGINAL VOLUME OF AT LEAST ONE (1) CUBIC YARD.

BLAST ROCK: ANY MATERIAL WHICH CANNOT BE EXCAVATED WITH A BACKHOE HAVING A BUCKET CURLING FORCE RATED AT NOT LESS THAN 25,700 POUNDS (CATERPILLAR MODEL 225 OR EQUIVALENT), AND OCCUPYING AN ORIGINAL VOLUME OF AT LEAST ONE-HALF (1/2) CUBIC YARD.

BLASTING SHOULD ONLY BE CONDUCTED WHERE RIPPING CANNOT EXCAVATE MATERIALS. WE RECOMMEND THAT EXCAVABLE SOILS BE REMOVED FIRST WITH CONVENTIONAL GRADING EQUIPMENT (SCRAPPERS AND LOADERS). WE DO NOT RECOMMEND LEAVING SOIL OVERBURDEN IN PLACE DURING BLASTING BECAUSE DETERMINATION OF BLAST ROCK QUANTITIES BECOMES VERY DIFFICULT AND COSTS ARE GENERALLY GREATER. IN ADDITION, RESIDUAL SOIL OVERBURDEN WILL INCREASE THE CONFINING PRESSURE OF THE ROCK AND REDUCE THE EFFECTIVENESS OF BLAST CHARGES. LOOSE FILL OR BLASTING MATS CAN BE PLACED OVER THE BLAST AREA TO CONTROL FLY-ROCK. REMOVAL OF ROCK BY BLASTING IS VERY EXPENSIVE. HENCE, CONTROL OF QUANTITIES IS IMPORTANT. WE RECOMMEND A GEOTECHNICAL ENGINEER BE RETAINED TO PROVIDE ASSISTANCE FOR DETERMINING OR QUALIFYING THE BLAST ROCK QUANTITIES.

DEMOLITION NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND RELOCATION OF ITEMS SHOWN ON DEMOLITION PLAN. ANY ITEMS NOT INDICATED ARE NOT IN QUESTION SHALL BE VERIFIED BY THE OWNER PRIOR TO PROCEEDING WITH CONSTRUCTION.
2. CONTRACTOR TO REMOVE ALL ABANDONED UTILITIES ON SITE.
3. INSTALL APPROPRIATE EROSION CONTROL MEASURES PRIOR TO DEMOLITION.
4. CONTRACTOR IS RESPONSIBLE FOR DISPOSING OF DEBRIS AND REFUSE IN AN APPROVED LOCATION.

CHARLOTTE URBAN FORESTRY -- TREE PLANTING AND PRESERVATION REQUIREMENTS:

CHARLOTTE URBAN FORESTRY -- TREE PLANTING AND PRESERVATION REQUIREMENTS

1. MINIMUM TREE SIZE AT PLANTING IS 2" CALIPER AND 6" TALL FOR SINGLE-STEM TREES. ALL MULTI-STEM PLANTS MUST BE TREE FORM. 13. UNDERGROUND UTILITY DEPARTMENT. FOR INFORMATION CONTACT CHARLOTTE DEPARTMENT OF TRANSPORTATION (704-336-4025) OR VISIT [HTTP://WWW.CHARMECK.ORG/DEPARTMENTS/TRANSPORTATION/STREET-MAINTENANCE/HOME.HTM](http://www.charmeck.org/departments/transportation/street-maintenance/home.htm).
 2. NON-STANDARD ITEMS (I.E. PAVERS, IRRIGATION SYSTEMS, ETC.) IN THE RIGHT-OF-WAY REQUIRE A RIGHT-OF-WAY ENCROACHMENT AGREEMENT WITH THE CHARLOTTE DEPARTMENT OF TRANSPORTATION/NORTH CAROLINA DEPARTMENT OF TRANSPORTATION BEFORE INSTALLATION. FOR CITY OF CHARLOTTE MAINTAINED STREETS, CONTACT CDDOT AT 704-336-3888.
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 9. CONTACT THE UTILITY COMPANY TO RELOCATE ANY EXISTING UTILITY POLES. ALL EXISTING UTILITIES WHICH CONFLICT WITH THE IMPROVEMENTS UNDER THE SCOPE OF THIS PROJECT MUST BE RELOCATED AT THE EXPENSE OF THE APPLICANT.
 10. ALL DEVELOPMENT CREATING A TOTAL OF 20,000 SQUARE FEET OF IMPERVIOUS AREA SINCE SEPTEMBER 1978 WILL REQUIRE STORM DRAINAGE DETENTION.
 11. TREES WITHIN THE STREET RIGHT OF WAY ARE PROTECTED BY LAW. A PERMIT IS REQUIRED FROM THE CITY ARBORIST AT (704)-336-4262 PRIOR TO THE REMOVAL OF ANY RIGHT OF WAY TREES. ALL TREES OVER 8" IN DIAMETER AS MEASURED 4.5' ABOVE GROUND AND LOCATED WITHIN THE SETBACK ARE PROTECTED BY LAW. CONTACT LAND DEVELOPMENT AT (704)-336-6692 FOR REQUIRED PERMITS.
 12. BEFORE YOU DIG STOP. CALL THE NO-CALL CENTER AT 1-800-632-4649. "IT'S THE LAW."
 13. THE DEVELOPER SHALL CONTACT THE CHARLOTTE DEPARTMENT OF TRANSPORTATION (GUS JORDI, 704-336-7086) TO IDENTIFY ANY CONFLICTS WITH TRAFFIC SIGNALIZATION EQUIPMENT. 60-90 DAYS WILL BE REQUIRED TO COORDINATE RELOCATION. DEVELOPER SHALL BE RESPONSIBLE FOR ALL RELOCATION COST AND/OR ANY REPAIR COST CAUSED BY THE CONTRACTOR/DEVELOPER.
 14. NO LIGHT/UTILITY POLES TO BE PLACED IN TREE ISLANDS.
 15. THE PURPOSE OF THE STORM DRAINAGE EASEMENT IS TO PROVIDE STORM WATER CONVEYANCE. BUILDINGS ARE NOT PERMITTED IN THE EASEMENT AREA. ANY OTHER OBJECTS WHICH IMPED STORMWATER FLOW OR SYSTEM MAINTENANCE ARE ALSO PROHIBITED.
 16. APPROVAL OF THIS PLAN IS NOT AN AUTHORIZATION TO GRADE ADJACENT PROPERTIES. WHEN FIELD CONDITIONS WARRANT OFF-SITE GRADING, PERMISSION MUST BE OBTAINED FROM THE AFFECTED PROPERTY OWNERS.
 17. IN ORDER TO ENSURE PROPER DRAINAGE, KEEP A MINIMUM OF 0.5% SLOPE ON THE CURB.
 18. HIGH-DENSITY POLYETHYLENE (HDPE) STORM DRAINAGE PIPE INSTALLED WITHIN EXISTING OR PROPOSED PUBLIC STREET RIGHT-OF-WAY MUST BE APPROVED BY THE CITY'S INSPECTOR PRIOR TO ANY BACKFILL BEING PLACED. BACKFILL MATERIAL MUST BE APPROVED BY THE CITY INSPECTOR PRIOR TO PLACEMENT OF THE MATERIAL WITHIN THE PUBLIC STREET RIGHT-OF-WAY.

PRIOR TO CONSTRUCTION, THE PROPOSED CONSTRUCTION AREA SHOULD BE STRIPPED OF TOPSOIL, ORGANIC MATERIAL, EXISTING UNDOCUMENTED FILL AND OTHER SOFT OR UNSUITABLE MATERIAL. UPON COMPLETION OF STRIPPING OPERATIONS, THE EXPOSED SUBGRADE IN AREAS TO RECEIVE FILL SHOULD BE PROTECTED WITH A LOADED DUMP TRUCK OR SIMILAR PNEUMATIC-TYRED VEHICLE HAVING A LOADED WEIGHT OF APPROXIMATELY 25 TONS. AFTER EXCAVATION, THE EXPOSED SUBGRADES IN CUT AREAS SHOULD BE SIMILARLY PROTECTED.

PROFILING OPERATIONS SHOULD BE PERFORMED UNDER THE OBSERVATION OF A GEOTECHNICAL ENGINEER OR HIS AUTHORIZED REPRESENTATIVE. THE PROFILING SHOULD CONSIST OF TWO (2) COMPLETE PASSES OF THE EXPOSED AREAS, WITH EACH PASS BEING IN A DIRECTION PERPENDICULAR TO THE PRECEDING ONE. ANY AREAS WHICH REFLECT RUT OR PUMP DURING THE PROFILING, AND FAIL TO BE REMOVED WITH SUCCESSFUL PASSES, SHOULD BE UNDERCUT TO SUITABLE SOILS AND BACKFILLED WITH COMPACTED FILL.

THE ABILITY TO DRY WET SOILS, AND THEREFORE THE ABILITY TO USE THEM FOR FILL, WILL LIKELY BE ENHANCED IF EARTHWORK IS PERFORMED DURING SUMMER OR EARLY FALL. IF EARTHWORK IS PERFORMED DURING WINTER OR AFTER APPRECIABLE RAINFALL, THEN FILL MAY BE UNSTABLE DUE TO WET SOIL CONDITIONS, WHICH COULD INCREASE THE AMOUNT OF UNDERCUTTING REQUIRED. DRYING OF WET SOILS, IF ENCOUNTERED, MAY BE ACCOMPLISHED BY SPREADING AND DISCING OR BY OTHER MECHANICAL OR CHEMICAL MEANS.

IF EXCAVATIONS IN PORTIONS OF THE SITE ENCOUNTER VERY DENSE SOILS, PARTIALLY WEATHERED ROCK, OR BORINGS AND/OR ADDITIONAL TESTING SHOULD UNDER OWNER'S APPROVAL BE PERFORMED TO FURTHER IDENTIFY DEPTH TO PARTIALLY WEATHERED ROCK AND ROCK.

EXISTING ISOLATED Boulders IN THE SOIL MATRIX OR ERRATIC ROCK CONDITIONS CAN SOMETIMES REMAIN UNDETECTED DURING FIELD EXPLORATION. IT IS RECOMMENDED THAT EQUIPMENT CAPABLE OF HEAVY EXCAVATION BE USED DURING GRADING ACTIVITIES. STORM WATER PUMPING PLANS SHOULD TAKE INTO ACCOUNT THE EXISTENCE OF DENSE MATERIALS AND ROCK PRIOR TO CONSTRUCTION.

PARTIALLY WEATHERED ROCK CAN SOMETIMES BE EXCAVATED WITHOUT BLASTING. IN MASS EXCAVATION FOR GENERAL SITE WORK, DENSE SOILS AND PARTIALLY WEATHERED ROCK CAN USUALLY BE REMOVED BY RIPPING WITH A SINGLE-TOOTH RIPPER ATTACHED TO A LARGE CRAWLER TRACTOR OR BY BREAKING IT OUT WITH A LARGE FRONT-END LOADER. SUBSURFACE MATERIALS WITH A STANDARD PENETRATION RESISTANCE VALUE OF 50/6, 50/5, AND 50/4 INCHES OF PENETRATION CAN LIKELY BE LOOSENED AND RIPPED AS NOTED ABOVE.

IN CONFINED EXCAVATIONS SUCH AS FOUNDATIONS, UTILITY TRENCHES, ELEVATOR PITS, ETC., REMOVAL OF PARTIALLY WEATHERED ROCK MAY REQUIRE USE OF HEAVY DUTY BACKHOES (SUCH AS A JOHN DEER 1200C OR EQUIVALENT EXCAVATOR EQUIPPED WITH ROCK TEETH), PNEUMATIC SPADES, OR LIGHT BLASTING. THE COST OF EXCAVATION DEPENDS ON THE QUALITY OF GRADING EQUIPMENT, SKILL OF THE EQUIPMENT OPERATORS AND GEOLOGICAL STRUCTURE OF THE MATERIAL ITSELF, SUCH AS THE DIRECTION OF BEDDINGS, PLANES OF WEAKNESS AND SPACING BETWEEN DISCONTINUITIES. THEREFORE, A CONSERVATIVE APPROACH CONCERNING BUDGET ESTIMATES FOR UTILITY AND STORM WATER POND EXCAVATIONS IS RECOMMENDED. SUBSURFACE MATERIAL THAT EXHIBITED A STANDARD PENETRATION RESISTANCE VALUE OF 50/5, 50/2, AND 50/4 INCHES OF PENETRATION OR LESS WILL LIKELY REQUIRE BLASTING FOR REMOVAL.

RIP ROCK: ANY MATERIAL THAT CANNOT BE REMOVED BY SCRAPPERS, LOADERS, PANS, DOZERS, OR GRADERS, AND REQUIRES THE USE OF A SINGLE-TOOTH RIPPER MOUNTED ON A CRAWLER TRACTOR HAVING A MINIMUM DRAW BAR PULL RATED AT NOT LESS THAN 50,000 POUNDS.

BLAST ROCK: ANY MATERIAL WHICH CANNOT BE EXCAVATED WITH A SINGLE-TOOTH RIPPER MOUNTED ON A CRAWLER TRACTOR HAVING A MINIMUM DRAW BAR PULL RATED AT NOT LESS THAN 50,000 POUNDS (CATERPILLAR 0-8 OR EQUIVALENT) OR BY A CATERPILLAR 977 FRONT-END LOADER OR EQUIVALENT, AND OCCUPYING AN ORIGINAL VOLUME OF AT LEAST ONE (1) CUBIC YARD.

BLASTING SHOULD ONLY BE CONDUCTED WHERE RIPPING CANNOT EXCAVATE MATERIALS. WE RECOMMEND THAT EXCAVABLE SOILS BE REMOVED FIRST WITH CONVENTIONAL GRADING EQUIPMENT (SCRAPPERS AND LOADERS). WE DO NOT RECOMMEND LEAVING SOIL OVERBURDEN IN PLACE DURING BLASTING BECAUSE DETERMINATION OF BLAST ROCK QUANTITIES BECOMES VERY DIFFICULT AND COSTS ARE GENERALLY GREATER. IN ADDITION, RESIDUAL SOIL OVERBURDEN WILL INCREASE THE CONFINING PRESSURE OF THE ROCK AND REDUCE THE EFFECTIVENESS OF BLAST CHARGES. LOOSE FILL OR BLASTING MATS CAN BE PLACED OVER THE BLAST AREA TO CONTROL FLY-ROCK. REMOVAL OF ROCK BY BLASTING IS VERY EXPENSIVE. HENCE, CONTROL OF QUANTITIES IS IMPORTANT. WE RECOMMEND A GEOTECHNICAL ENGINEER BE RETAINED TO PROVIDE ASSISTANCE FOR DETERMINING OR QUALIFYING THE BLAST ROCK QUANTITIES.

NCDDOT IMPROVEMENTS:

A. ALL STRIPING IN NCDOT RIGHT OF WAY SHALL BE THERMOPLASTIC PER CURRENT PAVEMENT STANDARDS AND SPECIFICATIONS.

EROSION CONTROL NOTES:

1. ALL "STD." NUMBERS REFER TO THE CITY OF CHARLOTTE LAND DEVELOPMENT STANDARDS MANUAL.

2. ON-SITE BURIAL PITS REQUIRE AN ON-SITE DEMOLITION LANDFILL PERMIT FROM THE ZONING ADMINISTRATOR.

3. ANY GRADING BEYOND THE DENIED LIMITS SHOWN ON THE PLAN IS A VIOLATION OF THE CITY OF CHARLOTTE EROSION AND SEDIMENT CONTROL ORDINANCE AND IS SUBJECT TO A FINE.

4. GRADING MORE THAN ONE ACRE WITHOUT AN APPROVED EROSION CONTROL PLAN IS A VIOLATION OF THE CITY AND COUNTY'S EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.

5. ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN 7 CALENDAR DAYS FROM THE LAST LAND-TO-DEVELOPING ACTIVITY. ALL OTHER DISTURBED AREAS SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN 14 CALENDAR DAYS FROM THE LAST LAND-TO-DEVELOPING ACTIVITY.

6. STABILIZATION IS THE BEST FORM OF EROSION CONTROL. TEMPORARY SEEDING IS NECESSARY TO ACHIEVE EROSION CONTROL ON LARGE DENURED AREAS AND ESPECIALLY WHEN SPECIFICALLY REQUIRED AS PART OF THE CONSTRUCTION SEQUENCE SHOWN ON THE PLAN.

7. FAILURE TO SCHEDULE AN ON-SITE MEETING WITH CITY OF CHARLOTTE EC INSPECTOR 48 HOURS PRIOR TO ANY LAND DISTURBING ACTIVITY IS A VIOLATION AND IS SUBJECT TO A FINE.

8. ADDITIONAL MEASURES TO CONTROL EROSION AND SEDIMENT MAY BE REQUIRED BY A REPRESENTATIVE OF THE CITY OF CHARLOTTE.

9. ANY LAND-DISTURBING ACTIVITY > 1 ACRES REQUIRES COMPLIANCE WITH ALL CONDITIONS OF THE GENERAL PERMIT TO DISCHARGE STORM WATER UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (PERMIT NO. NC0010000). ANY PERMIT NON-COMPLIANCE IS A VIOLATION OF THE CLEAN WATER ACT AND MAY REQUIRE ENFORCEMENT ACTION BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT, HEALTH, AND NATURAL RESOURCES.

10. SLOPES SHALL BE GRADED NO STEEPER THAN 2:1. FILL SLOPES GREATER THAN 10' REQUIRE ADEQUATE TERRACING.

11. A GRADING PLAN MUST BE SUBMITTED TO CITY OF CHARLOTTE FOR ANY LOT GRADING EXCEEDING ONE ACRE THAT WAS NOT PREVIOUSLY APPROVED.

12. DRIVEWAY PERMIT FOR CONSTRUCTION ENTRANCES IN NCDOT RIGHT OF WAY MUST BE PRESENTED AT PRE-CONSTRUCTION MEETING.

UTILITY NOTES:

1. EXACT LOCATIONS OF WATER SERVICE CONNECTIONS ARE REQUIRED FOR AS BUILT RECORDS.
2. MINIMUM COVER OF 36" FOR WATER AND SEWER LINES.
3. D.I.P. REQUIRED FOR WATER AND SEWER LINES IF FOLLOWING CONDITIONS ARE NOT MET:
 - 12" CLEARANCE FROM STORM DRAINS, GAS MAINS, TELEPHONE CUDT BUNKS AND UNDERGROUND UTILITY DEPARTMENT.
 - 18" VERTICAL CLEARANCE FOR WATER LINE INSTALLED ABOVE SEWER LINE.
 - WATER LINE CROSSING UNDER SEWER LINE.
 - 10' HORIZONTAL SEPARATION FOR WATER PARALLEL TO SEWER LINE.
4. SIZE AND LOCATION OF EXISTING WATER AND SEWER LINES TO BE VERIFIED BY THE CONTRACTOR.
5. CONTRACTOR SHALL COORDINATE THE PROPOSED WATER AND SEWER LINE WORK WITH THE CHARLOTTE MECKLENBURG UTILITY DEPARTMENT. (CMUD)
6. MATERIAL AND WORKMANSHIP REQUIREMENTS TO BE IN ACCORDANCE WITH THE CHARLOTTE MECKLENBURG UTILITY DEPARTMENT WATER AND SEWER POLICIES, PROCEDURES, STANDARDS AND SPECIFICATIONS FOR PUBLIC AND PRIVATE WATER AND SEWER LINES.
7. ALL 4" SANITARY SEWER LATERALS SHALL HAVE MIN. 1.0% SLOPE.
8. CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE ISAACS GROUP A MINIMUM OF 48 HOURS IN ADVANCE PRIOR TO THE CONSTRUCTION OF WATER AND SEWER LINES TO ALLOW A REPRESENTATIVE FROM THE ISAACS GROUP TO PERIODICALLY BE ON-SITE DURING CONSTRUCTION FOR PROVIDING INFORMATION FOR PROVIDING A SURVEY OF THE WATER AND SEWER LINES TO THE ISAACS GROUP UPON COMPLETION OF INSTALLATION.
9. PROVIDE MINIMUM OF 48 HOUR NOTICE TO OWNER OR REPRESENTATIVE.
10. THE CONTRACTOR IS RESPONSIBLE FOR REPAIR AND/OR REPLACEMENT OF ANY UTILITY DAMAGED DURING CONSTRUCTION.
11. THE CONTRACTOR SHALL USE EXTREME CARE WHEN WORKING NEAR ALL UNDERGROUND AND OVERHEAD UTILITIES.
12. THERE SHALL BE NO TAPS, PIPING BRANCHES, UNAPPROVED BYPASS PIPING, HYDRANTS, FIRE DEPT CONNECTION POINTS, OR OTHER WATER-USING APPURTENANCES CONNECTED TO THE SUPPLY LINE BETWEEN ANY WATER METER AND ITS CMUD-REQUIRED BACKFLOW PREVENTER.
13. EACH CMUD-REQUIRED BACKFLOW PREVENTION ASSEMBLY IS REQUIRED TO BE TESTED BY A CMUD-APPROVED CERTIFIED TESTER PRIOR TO PLACING THE WATER SYSTEM IN SERVICE.

BACKFLOW NOTES:

1. NO PERMANENT INSULATION MAY BE INSTALLED ON THE BP ASSEMBLY. IT IS RECOMMENDED THAT TAPS BE PROVIDED FOR ALL ABOVE-GROUND DOMESTIC AND COMBINATION SERVICE BP ENCLOSURES TO PREVENT FREEZE DAMAGE. IRRIGATION BPS CAN BE WINTERIZED BY DRAINING ALL WATER FROM THEM. ENCLOSURES FOR ABOVE-GROUND BP INSTALLATIONS ON FIRELINES ARE REQUIRED BY THE FIRE PEPT TO BE HEATED (MAINTAIN A MIN. OF 40° F.)
2. NO PLASTIC PIPING MATERIAL IS ALLOWED WITH 5' OF THE BP ENDS.
3. THE MOST REMOTE POINT OF EACH PROPOSED BUILDING IS WITHIN 750' OF A FIRE HYDRANT AS A TRUCK TRAVELS.
4. FIRE DEPARTMENT ACCESS ROAD AND PARKING LOT SHALL BE ABLE TO WITHSTAND 80,000 LBS OF TRUCK TRAVEL.
5. ALL ACCESS ROADS ARE A MIN. 20' UNOBSTRUCTED CLEAR WIDTH.]
6. EXISTING UTILITIES LOCATED BETWEEN EXISTING METER AND THE BUILDING SHALL BE ABANDONED.

LAND DEVELOPMENT NOTES

1. LAND DEVELOPMENT ENGINEER TO BE GIVEN 24 HOURS NOTICE PRIOR TO START OF CONSTRUCTION.
2. IN ROLLING AND HILLY TERRAINS, SWEERING OF THE STONE BASE AN/OR APPLICATION OF A TACK COAT MAY BE REQUIRED FOR NEAR INTERSECTIONS. THESE REQUIREMENTS WILL BE ESTABLISHED BY THE CITY INSPECTOR BASED ON FIELD CONDITIONS.
3. APPROVAL OF THIS PLAN IS NOT AN AUTHORIZATION TO GRADE ADJACENT PROPERTIES. WHEN FIELD CONDITIONS WARRANT OFF-SITE GRADING, PERMISSION MUST BE OBTAINED FROM THE AFFECTED PROPERTY OWNERS.
4. SUBSURFACE DRAINAGE FACILITIES MAY BE REQUIRED IN THE STREET RIGHT OF WAY IF DEEMED NECESSARY BY THE INSPECTOR.
5. DRIVEWAY PERMIT(S) MUST BE OBTAINED PRIOR TO ISSUANCE OF BUILDING PERMITS.
6. NON-STANDARD ITEMS (I.E. PAVERS, IRRIGATION SYSTEMS, ETC.) IN THE RIGHT OF WAY REQUIRE A RIGHT OF WAY ENCROACHMENT AGREEMENT WITH THE CHARLOTTE DEPT. OF TRANSPORTATION BEFORE INSTALLATION.
7. THE DEVELOPER SHALL MAINTAIN EACH STREAM, CREEK, OR BACKWASH CHANNEL IN AN UNOBSTRUCTED STATE AND SHALL REMOVE FROM THE CHANNEL AND BANKS OF THE STREAM ALL DEBRIS, LOGS, TIMBER, JUNK AND OTHER ACCUMULATIONS.
8. THE CITY OF CHARLOTTE ENGINEERING DEPARTMENT HAS NOT REVIEWED THE STRUCTURAL STABILITY OF AND SPECIFICATIONS PROVIDED IN THESE PLANS FOR THE FOLLOWING ITEMS: ANY RETAINING WALLS ON THE SITE AND DOES NOT ASSUME RESPONSIBILITY FOR THEM.
9. REFERENCE THE CHARLOTTE LAND DEVELOPMENT STANDARDS MANUAL AND/OR THE NCDOT DETAILS.

SIDEWALK NOTES:

1. SIDEWALK CROSS-SLOPE SHALL NOT EXCEED 2% AND THE RUNNING SLOPE ALONG THE TRAVEL PATH SHALL NOT EXCEED 5% EXCEPT AT DESIGNATED RAMP.
2. CROSS-SLOPES SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO POURING CONCRETE FOR THE SIDEWALKS.
3. IF AFOREMENTIONED SLOPES CAN NOT BE ATTAINED, THE ENGINEER SHOULD BE NOTIFIED PRIOR TO SIDEWALK INSTALLATION.
4. IF RAMP EXCEED 6' IN LENGTH WITHOUT A LANDING AREA OR IF THE RUNNING SLOPE ALONG THE TRAVEL PATH EXCEEDS 5%, HANDRAILS MAY BE REQUIRED. VERIFY WITH ENGINEER OR LOCAL INSPECTOR.

DRAINAGE NOTES:

1. REVERSE CURB AND GUTTER TO BE USED IN AREAS NOT CHANNELING STORM WATER RUNOFF.
2. THE PROPOSED CONTOURS WITHIN PAVED AREAS ARE GRAPHICAL REPRESENTATIONS ONLY. THE CONTRACTOR IS RESPONSIBLE FOR GRADING UNIFORMITY BETWEEN SPOT ELEVATIONS.
3. CONTRACTOR TO GRADE ALL AREAS WITHIN PROJECT TO DRAIN STORM WATER. CARE SHALL BE TAKEN TO ENSURE THAT ALL AREAS WITHIN PARKING LOTS AND LANDSCAPED ISLANDS SHALL NOT HOLD WATER UPON PROJECT COMPLETION.
4. MIN. SLOPE ON ALL ASPHALT TO BE 1.5%.
5. MIN. SLOPE ON CURB AND GUTTER CARRYING STORM WATER TO BE 0.5%.
6. MIN. SLOPE ON REVERSE CURB AND GUTTER TO BE 0.5%.

ADDITIONAL GRADING NOTES:

1. ANY CONSTRUCTION OR USE WITHIN THE FUTURE CONDITIONS FLOOD FRINGE LINE IS SUBJECT TO THE RESTRICTIONS IMPOSED BY THE FLOODWAY REGULATIONS OF THE CITY OF CHARLOTTE AND MECKLENBURG COUNTY.
2. PE SEALED SHOW DRAWINGS FOR RETAINING WALL MUST BE SUBMITTED TO CITY ENGINEERING PRIOR TO CONSTRUCTION.
3. PRIOR TO CO. SURVEYOR SEALED AS-BUILT DRAWINGS OF ALL WATER QUALITY BMP'S AND DETENTION SYSTEMS MUST BE PROVIDED.
4. PER SECTION 18-175(a) OF CITY CODE AND SECTION 10.0 OF THE CITY'S POST CONSTRUCTION CONTROLS ADMINISTRATIVE MANUAL, ALL REQUIRED NATURAL AREAS AND/OR POST CONSTRUCTION CONTROLS EASEMENTS MUST BE RECORDED PRIOR TO THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY.

COMPACTION NOTES:

1. IN CITY AND NCDOT RIGHT OF WAYS COMPACT ALL MATERIAL TO A DEPTH OF 12 INCHES BELOW THE FINISHED SURFACE OF THE SUBGRADE TO A DENSITY EQUAL TO AT LEAST 100% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH AASHTO 199 AS MODIFIED BY THE DEPARTMENT. COMPACT THE SUBGRADE AT A MOISTURE CONTENT WHICH IS APPROXIMATELY THAT REQUIRED TO PRODUCE THE MAXIMUM DENSITY INDICATED BY THE ABOVE TEST METHOD. THE CONTRACTOR SHALL DRY OR ADD MOISTURE TO THE SUBGRADE WHEN REQUIRED TO PROVIDE A UNIFORMLY COMPACTED AND ACCEPTABLE SUBGRADE. ALL OTHER FILL AREAS/BACKFILL SHALL BE COMPACTED TO 90% DENSITY IN ACCORDANCE WITH AASHTO 199 AS MODIFIED BY THE NCDOT.
2. STRUCTURAL FILL IN THE SITE UNDER BUILDING, PARKING AND DRIVEWAYS SHOULD BE PLACED IN THIN (8 TO 12 INCHES) LIFTS AND COMPACTED TO A MIN. OF 98% OF THE SOIL'S STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D698) OR 95% OF MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D1557) AT NEAR OPTIMUM MOISTURE CONTENT. THE UPPER 1 FOOT OF STRUCTURAL FILL WITHIN THE BUILDING PAD, DRIVEWAY AND PARKING AREAS SHOULD BE COMPACTED TO A MINIMUM OF 100% OF THE SOIL'S STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D698) AT NEAR OPTIMUM MOISTURE CONTENT. SOME MANIPULATION OF THE MOISTURE CONTENT (SUCH AS WETTING, DRYING) MAY BE REQUIRED DURING THE FILLING OPERATION TO OBTAIN THE REQUIRED DEGREE OF COMPACTION. THE MANIPULATION OF THE MOISTURE CONTENT IS HIGHLY DEPENDENT ON WEATHER CONDITIONS AND SITE DRAINAGE CONDITIONS. THEREFORE, THE GRADING CONTRACTOR SHOULD BE ADVISED OF THE MOISTURE CONTENT OF THE SUBGRADE. THE CONTRACTOR SHALL OBTAIN THE SPECIFIED COMPACTION DURING GRADING. SUFFICIENT DENSITY TESTS SHALL BE OBTAINED FROM THE LAST LAND-DISTURBING ACTIVITY TO CONFIRM THE REQUIRED COMPACTION OF THE FILL MATERIAL.
3. IN UNPAVED AREAS, THE TOP SIX INCHES SHALL BE COMPACTED TO A MIN. OF 90% ASTM D698 STANDARD PROCTOR.

NO.	BY	DATE	REVISION

Project	PUBLIC ROAD 7 AT RIVERBEND W/IN THE CITY OF CHARLOTTE CHARLOTTE, NORTH CAROLINA
Title	