Summary of process:

1994 - Town develops P&R Comp Plan identifying needs
1999 - Town purchases 10.16 acres of land for MLK Jr. Park
Spring 2000 - Planning for park begins (two public meetings held)
June 2004 - Master Plan unanimously adopted by BOA
September 2006 - MLK Park described in Parks Comp Plan
2014 - Master Plan updated to reflect current needs (4 public meetings held)
February 2016 - Modified Master Plan adopted by BOA and approved for design
June 2016 - BOA requests edits of master plan and approves for design and construction
Fall 2016 - Stewart engaged to complete construction drawings for park.
Spring - Summer 2017 - Stewart details park drawings, reviews permitting regulations, holds a public meeting and presents at three public hearings.
June 27, 2017 - Stewart presents plans for BOA approval on final design before receiving permits and completing construction documents.
30% PLAN PRESENTED AT FEBRUARY 6 RECREATION COMMISSION MEETING FOR FEEDBACK

RAINWATER HARVESTING
AMPHITHEATER SEATING
YOUTH CYCLING AREA
EXERCISE STATIONS
GREEN ROOF
POLINATOR GARDENS
CONSTRUCTED WETLAND
NATURAL PLAYGROUND

MLK JR PARK | CARRBORO, NC
30% SD : ILLUSTRATIVE RENDERING
MLK JR PARK | CARRBORO, NC
90% CD : ILLUSTRATIVE RENDERING

RAINWATER HARVESTING
AMPHITHEATER SEATING
YOUTH CYCLING AREA
EXERCISE STATIONS
NATURAL PLAYGROUND
POLLINATOR GARDENS
GREEN ROOF
CONSTRUCTED WETLAND

HILLSBOROUGH ROAD
DOVE STREET

90% CD'S - WITH PREFERRED PUMP TRACK LOCATIONS
100% PLAN RENDERING - OPTION A

1. Rainwater Harvesting
2. Amphitheater Seating
3. Pump Track
4. Exercise Stations
5. Natural Playground
6. Pollinator Gardens
7. Green Roof
8. Constructed Wetland

MLK JR PARK | CARRBORO, NC
100% CD : ILLUSTRATIVE RENDERING - OPTION A
RAINWATER HARVESTING

AMPHITHEATER SEATING

PUMP TRACK

EXERCISE STATIONS

POLLINATOR GARDENS

GREEN ROOF

CONSTRUCTED WETLAND
MARTIN LUTHER KING, JR PARK

1120 HILLSBOROUGH RD
CARRBORO, NC 27516

TOWN OF CARRBORO
95% CDs

SUBMITTED ON JUNE 22, 2017
EROSION CONTROL NOTES

1. INSPECTOR REFERS TO LOCAL JURISDICTIONAL (NCDENR OR LOCAL) LAND QUALITY INSPECTOR OR HIS REPRESENTATIVE. FIELD
FUNCTIONING. WRITTEN RECORDS SHALL BE MAINTAINED BY THE CONTRACTOR THROUGHOUT THE DURATION OF THE PROJECT. COPIES
PROTECTED TREE AREA.

2. NO STORAGE OF MATERIALS, FILL, OR EQUIPMENT AND NO TRESPASSING SHALL BE ALLOWED WITHIN THE BOUNDARY OF THE
PERMANENT GROUND COVER IS ESTABLISHED IN ACCORDANCE WITH NCGS 113A-54.1 AND 15A NCAC 4B.0131 TO MAKE SURE THAT THE
LAND-DISTURBING ACTIVITIES IS REQUIRED TO INSPECT THE PROJECT AFTER EACH PHASE OF THE PROJECT AND CONTINUED UNTIL
PROVIDE DUST CONTROL MEASURES INCLUDING, BUT NOT LIMITED TO, WETTING DOWN TO CONTROL DUST ON SITE, IN ORDER TO
BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT LADEN WATER INTO THE DOWNSTREAM SYSTEM.

3. TREE OR STRIPPING OF TOPSOIL, A CLEAN, SHARP, VERTICAL CUT SHALL BE MADE AT THE EDGE ON THE TREE ROOTS OUTSIDE
OF THE TREE SAVE AREA. THIS SHALL OCCUR AT THE SAME TIME THAT OTHER EROSION CONTROL MEASURES ARE INSTALLED.

4. INSPECT ALL SEEDED AREAS AND MAKE NECESSARY REPAIRS OR RESENDING WITHIN THE PLANTING SEASON, IF POSSIBLE. IF
STAND SHOULD BE OVER 50% DAMAGED, RE-ESTABLISH FOLLOWING ORIGINAL LIME, FERTILIZER AND SEEDING RATES AND
SEEDING.

5. STAND SHOULD BE MORE THAN 60% DAMAGED, RE-ESTABLISH FOLLOWING THE ORIGINAL LIME, FERTILIZER AND SEEDING RATES.
APPLY ALL AGRICULTURAL LIME, FERTILIZER, AND SUPERPHOSPHATE UNIFORMLY AND MIX WITH SOIL (SEE BELOW).

6. TALL FESCUE AND
***OR SORGHUM-SUDAN HYBRIDS
***BROWNTOP MILLET
ANNUAL RYE
***BROWNTOP MILLET

7. MULCH IMMEDIATELY AFTER SEEDING AND ANCHOR MULCH.

8. REMOVE ALL LOOSE ROCK, ROOTS AND OTHER OBSTRUCTIONS, LEAVING SURFACE REASONABLY SMOOTH AND UNIFORM.
RIP THE ENTIRE AREA TO SIX INCHES DEEP.

9. CHISEL COMPACTED AREAS AND SPREAD TOPSOIL 3 INCHES DEEP OVER ADVERSE SOIL CONDITIONED, IF AVAILABLE.

10. STAND SHOULD BE OVER 50% DAMAGED , REESTABLISH FOLLOWING ORIGINAL LIME, FERTILIZER AND SEEDING RATES AND
SEEDING.

11. STAND SHOULD BE MORE THAN 60% DAMAGED, RE-ESTABLISH FOLLOWING THE ORIGINAL LIME, FERTILIZER AND SEEDING RATES.
APPLY ALL AGRICULTURAL LIME, FERTILIZER, AND SUPERPHOSPHATE UNIFORMLY AND MIX WITH SOIL (SEE BELOW).

12. MOWING, OTHERWISE FESCUE MAY BE SHADED OUT.

13. OBTAIN GRADING PERMIT.

14. CONTINUOUS CONSTRUCTION ACTIVITY. THIS SHALL OCCUR AT THE SAME TIME THAT OTHER EROSION CONTROL MEASURES ARE INSTALLED.

15. CONTINUOUS PRECONSTRUCTION ConfErence MUST BE HELD 48 HOURS PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITIES. THE
ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED PRIOR TO OR IN CONJUNCTION WITH ALL CLEARING AND GRADING SO
ACCOUNT FOR CHANGING SITE CONDITIONS (E.G., ADDITIONAL SUMP PUMPS, RELOCATION OF DITCHES AND SILT FENCES, ETC.);

16. ALL STORAGE OF MATERIALS, FILL, OR EQUIPMENT AND NO TRESPASSING SHALL BE ALLOWED WITHIN THE BOUNDARY OF THE
PERMANENT GROUND COVER IS ESTABLISHED IN ACCORDANCE WITH NCGS 113A-54.1 AND 15A NCAC 4B.0131 TO MAKE SURE THAT THE
LAND-DISTURBING ACTIVITIES IS REQUIRED TO INSPECT THE PROJECT AFTER EACH PHASE OF THE PROJECT AND CONTINUED UNTIL
PROVIDE DUST CONTROL MEASURES INCLUDING, BUT NOT LIMITED TO, WETTING DOWN TO CONTROL DUST ON SITE, IN ORDER TO
BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT LADEN WATER INTO THE DOWNSTREAM SYSTEM.

17. OFFICE HOURS: 8:00 AM TO 5:00 PM.

18. MOWING, OTHERWISE FESCUE MAY BE SHADED OUT.

19. ARRANGE DRIVING MANAGEMENT PLAN AND PAYMENT ACCORDANCE WITH NCGS 113A-54.1 AND 15A NCAC 4B.0131 TO MAKE SURE THAT THE
LAND-DISTURBING ACTIVITIES IS REQUIRED TO INSPECT THE PROJECT AFTER EACH PHASE OF THE PROJECT AND CONTINUED UNTIL
PROVIDE DUST CONTROL MEASURES INCLUDING, BUT NOT LIMITED TO, WETTING DOWN TO CONTROL DUST ON SITE, IN ORDER TO
BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT LADEN WATER INTO THE DOWNSTREAM SYSTEM.

20. MOWING, OTHERWISE FESCUE MAY BE SHADED OUT.

21. MOWING, OTHERWISE FESCUE MAY BE SHADED OUT.
UTILITY NOTES

1. RELOCATED SHALL BE REPLACED WITH A NEW FIRE HYDRANT MEETING THE RIGHT OF WAY PRIOR TO RECEIPT AND COMPLIANCE WITH ALL APPLICABLE UNDERGROUND UTILITIES (WATER, SEWER, STORM, ELECTRICAL, GAS, OR REFER TO SHEET C3.00 FOR GENERAL NOTES.

5. THE CONTRACTOR SHALL NOT RE-USE ANY FIRE HYDRANT REMOVED AS PART OF THIS PROJECT. ANY FIRE HYDRANT SHOWN TO BE REMOVED OR CONSTRUCTION SHALL ALSO BE RESPONSIBLE FOR THE INSTALLATION OF ALL OTHER) FOR THIS PROJECT WITH THE BUILDING PLANS. THE UTILITY CONTRACTOR SHALL NOT PROCEED WITH ANY WORK INSIDE THE PUBLIC TO BEGINNING WORK.

7. THE CONTRACTOR SHALL COORDINATE ALL PEDESTRIAN AND VEHICULAR ELEVATIONS OF UTILITIES ARE GIVEN TO THE EXTENT OF INFORMATION PROVIDED FOR WATER, SEWER, STORM INCLUDING ALL STRUCTURES, VALVES, LOCAL JURISDICTION OR ENGINEER THE CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS (IN BOTH PAPER AND ELECTRONIC FORMAT (CAD / PDF) REFERENCED IN THESE PLANS PRIOR TO ANY EXCAVATION OR CONSTRUCTION DOCUMENTS ARE SHOWN IN THEIR APPROXIMATE LOCATION BASED ON

8. CONDUIT SHALL BE INSTALLED FOR THE "FUTURE" UTILITY INSTALLATION.

11. UNLESS OTHERWISE NOTED, LOCATE SANITARY SERVICE CLEANOUTS AT ALL HORIZONTAL OR VERTICAL CHANGES IN DIRECTION. MAXIMUM SPACING BETWEEN CLEANOUTS SHALL BE 75 FEET.

SEPARATION OF SANITARY SEWERS AND STORM SEWERS:

8" SEWER SERVICE - SDR-35
6" SEWER SERVICE - 1.00% SLOPE
4" SEWER SERVICE - 2.00% SLOPE

SEWER LINES UNDER CONSTRUCTION SHALL BE PROTECTED FROM DIRT, DEBRIS OR OTHER CONTAMINANTS ENTERING THE NEW SYSTEM. A MECHANICAL PLUG SHALL BE UTILIZED BOTH SHALT BE PROTECTED FROM ANY INFLOW OF WATER, DIRT OR DEBRIS DUE TO NEW PRIVATE SEWER

WATER MAINS SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM EXISTING OR PROPOSED SEWER LINES; OR THE WATER MAIN AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER; OR

THE WATER MAIN IS LAID IN THE SAME TRENCH AS THE SEWER WITH THE WATER MAIN MANHOLES LOCATED IN PAVEMENT, CONCRETE OR OTHER TRAFFIC AREAS SHALL BE SET AT MANHOLES BEARING CASTINGS.

ALL MANHOLES COVERS SHALL BE PAINTED TO LOCAL JURISDICTIONAL REQUIREMENTS.

SANITARY SEWER MANHOLE TIE IN TO EXISTING EXISTING SANITARY SEWER (TYP)
EXISTING SANITARY SEWER MANHOLE

SANITARY SERVICE CLEANOUTS

UNLESS OTHERWISE NOTED, ALL SANITARY SEWER MANHOLES ARE 4' DIA. MANHOLES LOCATED IN PAVEMENT, CONCRETE OR OTHER TRAFFIC AREAS SHALL BE SET AT

0+25 0+50 0+75
1-1/2 "x1-1/2" 45
6" GATE VALVE
1"=10'
SCALE: 1"=50'
4" CONCRETE SIDEWALK

NOTE: PEDESTRIAN AREAS ONLY

NOTE: TOOLED CONTROL JOINTS NOT MORE THAN 10'-0" ON CENTER OR AS INDICATED ON THE PLANS.

TOOLED CONTROL JOINT 4" OF SLAB THICKNESS AT 10' MIN SPACING, OR AS SHOWN ON PLANS

ENGINEERED WOOD FIBER SURFACING

NOTE: ALL SURFACES TO RECEIVE MEDIUM BROOM FINISH PERPENDICULAR TO DIRECTION OF WALK.

NOTE: INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH STABILIZER MANUFACTURER'S SPECIFICATIONS.
1. HOPPING LOGS
   - Elevations
   - 1.00'
   - 1.50'
   - 3.00'
   - Tree stumps placed in a row for hopping

2. SEESAW
   - Elevations

3. WATER TABLE
   - Elevations

4. Embankment Slide
   - Elevations

5. WILLOW TUNNEL
   - Elevations
   - Top can be tied with rope or willow stakes can be bent and woven together.
   - Willow tunnel, structure made of bent willow stakes; bore holes using a pointed metal bar; plant stakes into ground and build into shape.

6. BALANCING & CLIMBING LOG
   - Elevations

7. KOMPAN SINGLE BASKET SWING
   - Elevations

8. BALANCE BEAM
   - Elevations

9. KOMPAN CLIMBING NET
   - Elevations

Additional notes:
- Sand top of stump to level and reduce jagged edges.
- Recycled tire used as seat bumper.
- Nylon strap used as handle, both sides.
- Reclaimed tree trunk used as seesaw beam.
- Seat area filed and sanded flat, both sides.
- Willow tunnel structure made of bent willow stakes; bore holes using a pointed metal bar; plant stakes into ground and build into shape.
- Top can be tied with rope or willow stakes can be bent and woven together.
- Embankment slide w/sit down bar.
- Embankment slide.
- Firm license #: C-1051
- www.stewartinc.com
- Project #: C16146
- Client:
  - Vicinity map:
- Issued for:
  - Title:
    - Sheet:
  - Project:
    - Date:
      - Drawn by:
        - Approved by:
- Unit: Annual Plan
- Date: 06.22.2017
- Scale: 95% CDs
- Town of Carrboro
  - 301 W. Main Street
  - Carrboro, NC 27510
  - T: (919) 918-7364
  - F: (919) 918-4475
- Pre-Certified - Do Not Use for Construction
- Q:\2016\C16146 - MLK Jr Park\DWGS\1 - Design\Sheets\C16146-C9.00-Details.dwg
- Jun 22, 2017 - 10:56am

SITE DETAILS
- 95% CDs
- Description
  - No.
  - Date
  - Sheet
UTILITY DETAILS

1. WATER METER
2. TAPPING SLEEVE AND VALVE
3. WATERLINE BEND
4. BLOCKING
5. FIRE HYDRANT
6. FIREHYDRANT PAINT
7. SANITARY SEWER BEDDING
8. CLEANOUT
9. VALVE BOX INSTALLATION AND EXTENSION

Client: Vicinity map:
Issued for:
Title:
Sheet:
Project number:
Date:
Drawn by:
Approved by:

MARTIN LUTHER KING, JR. PARK

95% CDs

TOWN OF CARRBORO
301 W. MAIN STREET
CARRBORO, NC  27510
T: (919) 918-7364
F: (919) 918-4475

421 FAYETTEVILLE ST., SUITE 400
RALEIGH, NC 27601
919.380.8750

PRELIMINARY - DO NOT USE FOR CONSTRUCTION

Q:\2016\C16146 - MLK Jr Park\DWGS\1 - Design\Sheets\C16146-C9.00-Details - ENGR.dwg  Jun 22,  2017 - 10:57am
C9.31

Utility Details

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Site of Carroll, Inc.
421 Fayetteville St., Suite 400
Raleigh, NC 27601
T: 919.380.8750
www.stewartinc.com

Issued for:

Client:

Project:

Title:

Sheet:

Project Number:

Date:

Drawn by:

Approved by:

Encasement for Jack and Bore

1

NTS

Utility Details

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95% CDs
CROWN OBSERVATIONS - HIGH BRANCHED

1. TREE (TYPICAL)

2. SHRUB (TYPICAL)

3. GROUNDCOVER PLANTING (TYPICAL)

4. WETLAND PLANTING (LIVE STAKING)

5. PLACEDHOLDER (POLLINATOR PLANTING)

6. PLACEDHOLDER

7. CROWN OBSERVATIONS - HIGH BRANCHED

8. SHRUB AND GROUNDCOVER SPACING

9. PLANTING NOTES
AREA RESERVED FOR ARTWORK/MURALS

1. PRESENTATION - RESTROOM - EAST ELEVATION
2. PRESENTATION - RESTROOM - SOUTH ELEVATION
3. PRESENTATION - RESTROOM - WEST ELEVATION
4. PRESENTATION - RESTROOM - NORTH ELEVATION

5. PRESENTATION - RESTROOM ENTRY - WEST ELEVATION
6. PRESENTATION - RESTROOM ENTRY - EAST ELEVATION
**PROJECT NARRATIVE**

The Martin Luther King Jr. Park in Carrboro will have several different structures to serve the interests of the community. These structures include a restroom building, two sheltered tents, a garden storage area, and an amphitheater. Reclaimed wood siding from the historic storage structure will be incorporated into the new structures. Rain water will be collected into cisterns to be used throughout the site and in the community garden.

**SCHEDULE OF ALTERNATES**

NOTE: "PERMIT SET" means that the permit is set for review by the appropriate reviewing agency. The plan should be submitted for review at the time of the permit application. The contents of the plan must be complete and correct to the extent that the reviewing agency can make a meaningful review of the project. Any changes made after the permit is set may require additional fees. Additional permits may be required for any special conditions identified by the reviewing agency.

**LEAD-BASED PAINT WARNING**

DURING WORK WITH ALL LEAD CONTAINING MATERIALS, ALL TESTING AND/OR OTHER CONFIRMATORY TESTING OR THE COMPLETE DISASSEMBLY OF THE STRUCTURE MAY BE REQUIRED.

**PERMIT SET**

04-27-2017
WORST-CASE TRAVEL DISTANCE = 28' - 3" (MAX ALLOWABLE 75')
WORST-CASE TO COMMON PATH OF TRAVEL = 28' - 3" (MAX ALLOWABLE 75')
WORST-CASE COMMON TRAVEL PATH = 28' - 3"
WORST-CASE DEAD END = 5' - 3" (MAX ALLOWABLE 20')

NUMBER OF OCCUPANTS

LIFE SAFETY PLAN LEGEND

- Denotes Dedicated Exit
- Denotes Egress Area, Egress Area Boundary
- Denotes Emergency Exits
- Denotes Storage (1 Person Per 300 SF Gross)
- Denotes Unoccupiable Space (0 Occupants)

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<th>OCCUPANCY</th>
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<th>PERSONS</th>
<th>LOAD</th>
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LIFE SAFETY PLAN

MARTIN LUTHER KING JR. PARK
TOWN OF CARRBORO
1201 HILLSBOROUGH ROAD
CARRBORO, NC 27516

DATE ISSUED: 04-27-2017
PERMIT SET: 05-19-2017
PROJECT STATUS: 06-20-2017 3:49:10 PM

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DOOR & FRAME NOTES

1. SEE DETAILS FOR HEAD, JAMB, AND THRESHOLD DETAILS FOR DOORS.
2. ALL DOOR METAL FRAMES 2" WIDE, FACE FRAME, U.N.O.
3. ALL DOORS PROVIDED WITH CENTER MULLION TO HAVE MULLION REMOVABLE VIA KEYED MECHANISM.
4. ALL FRAMES AT MASONRY WALLS 6" DEEP, TYP. U.N.O.
5. EXTERIOR DOORS ARE TO BE RECESSED 2" FROM FACE OF EXTERIOR MASONRY, TYP. U.N.O.
6. ALL GLASS IN DOORS AND SIDELITES TO BE TEMPERED, TYP.

T = TEMPERED GLASS

DOOR SCHEDULE

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<tr>
<th>DOOR NO.</th>
<th>ROOM</th>
<th>ELEV. WIDTH</th>
<th>ELEV. HEIGHT</th>
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<th>MAT'L FINISH</th>
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<td>HM PAINT I</td>
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1. GC IS REQUIRED TO PROVIDE COORDINATION DRAWINGS FOR ALL MEP SYSTEMS OVERHEAD AND IN CEILINGS.
2. SEE MEP SHEETS FOR ADDITIONAL CEILING NOTES.

RCP GENERAL NOTES

1. SEE RECLAIMED DOWNSPUTS IN DETAIL SHEET 602
2. SEE DETAIL SHEET 602

RCP KEYNOTES

C1 RECLAIMED SIDING SOFFIT. SEE DETAIL SHEET 602

RCP LEGEND

- Reflected Ceiling Plan
- Garden Shelter Reflected Ceiling Plan
- Amphitheater Reflected Ceiling Plan
- Restroom Reflected Ceiling Plan

RCP SHEET LIST

- Restroom Reflected Ceiling Plan
- Garden Shelter Reflected Ceiling Plan
- Amphitheater Reflected Ceiling Plan
- Reflected Ceiling Plans
RCP LEGEND

1. GC IS REQUIRED TO PROVIDE COORDINATION DRAWINGS FOR ALL MEP SYSTEMS OVERHEAD AND IN CEILINGS.

2. SEE MEP SHEETS FOR ADDITIONAL CEILING NOTES.

RCP GENERAL NOTES

1. SEE MEP SHEETS FOR ADDITIONAL SYSTEMS NOTES.

2. EXIT SIGNS; SEE ELECTRICAL DRAWINGS.

3. VENTED CEMENT BOARD SOFFIT

4. SURFACE-MOUNTED SUPPLY DIFFUSER; SEE MECHANICAL DRAWINGS

5. SKYLIGHT TUBE

6. RECLAIMED SIDING

7. RECESSED LIGHT FIXTURE; SEE ELECTRICAL DRAWINGS

8. VENTED CEMENT BOARD SOFFIT

9. EXIT SIGNS; SEE ELECTRICAL DRAWINGS

10. SURFACE-MOUNTED RETURN DIFFUSER; SEE MECHANICAL DRAWINGS
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PLUMBING ABBREVIATIONS

ACW ACID WASTE
AUTO AUTOMATIC
AFG ABOVE FINISHED GRADE
AFC ABOVE FINISHED CEILING
ACFM ACTUAL CUBIC FEET PER MINUTE
COMPRESSED AIR
ID INDIRECT DRAIN OR INSIDE DIAMETER
HWR HOT WATER RETURN
HT HEIGHT
HORIZ HORIZONTAL
GPM GALLONS PER MINUTE
GCO GRADE CLEANOUT
GC GENERAL CONTRACTOR
GAL GALLONS
GA GAGE
G NATURAL GAS
FS FLOOR SINK
FLEX FLEXIBLE
FFE FINISHED FLOOR ELEVATION
FCO FLOOR CLEANOUT
F FAHRENHEIT
EXP EXPANSION
EWH ELECTRIC WATER HEATER
EQUIP EQUIPMENT
ELEC ELECTRICAL
DWG DRAWING
DIV DIVISION
DIA DIAMETER
DI DUCTILE IRON
CW COLD WATER
CUFT CUBIC FOOT; CUBIC FEET
CU COPPER
CPVC CHLORINATED POLYVINYL CHLORIDE
CONC CONCRETE
C CELSIUS
BTUH BRITISH THERMAL UNIT PER HOUR
BOS BOTTOM OF STEEL
BAS BUILDING AUTOMATION SYSTEM
Ø ROUND; DIAMETER; PHASE
TOS TOP
TMV TAP WATER METER VALVE
TD TAP WATER DEVICE
VTR VENT THRU ROOF
VAC VACUUM (SUCTION)
V VENT
SRV SAFETY RELIEF VALVE
SF SQUARE FEET
SECT SECTION
SD STORM DRAIN
SCH SCHEDULE
SCFM STANDARD CUBIC FEET PER MINUTE
RM ROOM
RO REVERSE OSMOSIS
RL ROOF LEADER
REV REVISION
RECIRC RECIRCULATING
RD ROUND; ROOF DRAIN
QTY QUANTITY
PSIG POUNDS PER SQUARE INCH GAUGE
OD OUTSIDE DIAMETER, OVERFLOW (EMERGENCY)
NTS NOT TO SCALE
NO NITROUS OXIDE
MOCP MAXIMUM OVER CURRENT PROTECTION
MH MANHOLE
MFR MANUFACTURER
MECH MECHANICAL
MCA MINIMUM CIRCUIT AMPS
ST STORM
MA MEDICAL AIR
LP LOW PRESSURE
W/O WITHOUT
W/ WITH
W WASTE
UL UNDERWRITERS LABORATORIES
TYPICAL
TOS TOP OF STEEL
DRAIN
(SEE ABBREVIATIONS FOR SYSTEM TYPES)

PLUMBING DRAWING LIST

WATER & SANITARY LOAD SUMMARY

WATER DEMAND (GPM) 49.4
WATER (FIXTURE UNITS) 51.25

PLUMBING GENERAL NOTES:

1. COORDINATE WORK WITH OTHER TRADES PRIOR TO PURCHASE AND INSTALLATION OF NEW PIPING, OR EQUIPMENT. NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES PRIOR TO INSTALLATION.

2. REFER TO THE ARCHITECTURAL PLANS FOR DIMENSIONS. DO NOT SCALE THESE DRAWINGS.

3. ALL SPECIFICATIONS AND LOCATIONS GIVEN ARE APPROXIMATE AND ARE NOT TO SCALE. DRAWN TO SCALE IF OTHERWISE Indicated.

4. LOCATE PIPING AND EQUIPMENT SUCH THAT ACCESS PANELS MAY BE FULLY OPENED (VIA TILE CEILING) FOR MAINTENANCE. COORDINATE LOCATIONS WITH OTHER TRADES PRIOR TO PURCHASE AND INSTALLATION.

5. INSTALL ALL EQUIPMENT WITH THE MANUFACTURER'S RECOMMENDATIONS AND CODE REQUIREMENTS.

6. INSTALL ALL EQUIPMENT WITH THE MANUFACTURER'S RECOMMENDATIONS AND CODE REQUIREMENTS. NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES PRIOR TO INSTALLATION.

7. INSTALL ALL EQUIPMENT WITH THE MANUFACTURER'S RECOMMENDATIONS AND CODE REQUIREMENTS. NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES PRIOR TO INSTALLATION.

8. INSTALLATION OF NEW PIPING, OR EQUIPMENT. NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES PRIOR TO INSTALLATION.

PLUMBING PERIOD SYMBOLS

PLUMBING SYMBOLS

ELECTRICAL SYMBOLS

GENERAL SYMBOLS

WATER & SANITARY LOAD SUMMARY

WATER DEMAND (GPM) 49.4
WATER (FIXTURE UNITS) 51.25
KEY NOTES TO FIX:

1. NEW DOMESTIC WATER SERVICE PIPE BELOW GRADE EXTENDED 10' BEYOND EXTERIOR WALL OF BUILDING. COORDINATE CONNECTION LOCATION WITH EXTERIOR DOMESTIC WATER SERVICE (REFER TO CIVIL DRAWINGS).

2. ABOVE CEILING. COORDINATE EXACT LOCATION/HEIGHT WITH OTHER TRADES (HVAC, ETC.).

3. PIPING BELOW FLOOR. COORDINATE EXACT LOCATION AND ELEVATION WITH OTHER TRADES AND UTILITIES.

4. SANITARY WASTE BUILDING DRAIN BELOW GRADE. EXTEND 10' BEYOND EXTERIOR WALL OF BUILDING. INSTALL CLEANOUT Flush WITH GRADE OR WALK. COORDINATE CONNECTION LOCATION AND ELEVATION WITH EXTERIOR BUILDING SEWER (REFER TO CIVIL DRAWINGS).

5. DROP PIPING TIGHT TO WALL.

6. LOCATE VALVES TO BE EASILY ACCESSIBLE FROM REMOVABLE CEILING TILE OR CEILING ACCESS DOOR.

7. INTERIOR WATER MAIN SHUTOFF VALVE.

8. WATER HEATER. SEE DETAIL.

9. 3" VENT UP THROUGH ROOF.

10. BELLOWS TYPE WATER HAMMER ARRESTOR.

11. RPZ STYLE BACKFLOW PREVENTER. SEE DETAIL 4/P300.

12. DOMESTIC WATER PIPING LOW IN CHASE.

13. DOMESTIC WATER PIPING IN CHASE WALL.

14. SANITARY SEWER MAIN OUT BY UTILITY CONTRACTOR. CONNECTION TO BUILDING MAIN BY PLUMBING CONTRACTOR.

15. SEE ARCHITECTURAL PLANS FOR EXACT LOCATION OF FLOOR DRAIN.

16. LOCATE VALVES TO BE EASILY ACCESSIBLE IN CHASE. COORDINATE EXACT LOCATION AND ELEVATION WITH OTHER TRADES AND UTILITIES.

17. COLD WATER PIPING BELOW GRADE. COORDINATE EXACT LOCATION AND ELEVATION WITH OTHER TRADES AND UTILITIES.
**EXTERIOR WALL**

**PUBLIC WATER**

**ROUTE FROM ESCUTCHEON SYSTEM PLATE VALVE GAUGE BALL PRESSURE**

**STRAINER - PATTERN THREADED NIPPLE WITH CAP**

**Elastomeric DRAIN TUBE SEALANT FILL GRADE (CAST IN PLACE)**

**PVC SLEEVE VALVE GATE P300**

**WATER SERVICE ENTRANCE CAST IRON CLEANOUT PLUG**

**Provide 304 Stainless Steel Vermin Screen and Frame.**

**Provide 3/4" Pan Drain Route Drain to Mop Sink**

**YARD HYDRANT**

**YARD CLEANOUT**

---

**SW DETAIL: PB07**

**SW DETAIL: PB08**

**SW DETAIL: PB11**

---

**NOTES**

1. **Pipe Joints shall be consistent with piping materials.**
2. **Install dielectric fitting between dissimilar materials.**
3. **Provide stainless steel vermin screen and frame.**
4. **Provide additional drain line from RPZ.**

---

**EQUIPMENT CONNECTIONS TO EQUIPMENT**

**CLEARANCES FOR ELECTRICAL EQUIPMENT**

---

**TABLE 1: WORKING CLEARANCES**

<table>
<thead>
<tr>
<th>Width of Equipment</th>
<th>Minimum Working Clearance</th>
</tr>
</thead>
<tbody>
<tr>
<td>12&quot;</td>
<td>36&quot;</td>
</tr>
<tr>
<td>24&quot;</td>
<td>48&quot;</td>
</tr>
<tr>
<td>36&quot;</td>
<td>60&quot;</td>
</tr>
</tbody>
</table>

Where the connections are as follows:

1. **Provide 3/4" Pan Drain Route to Mop Sink**
2. **Provide 304 Stainless Steel Vermin Screen and Frame.**
3. **Provide additional drain line from RPZ.**

---

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**DO NOT USE FOR CONSTRUCTION**

**Sheet Check Set**

**Project Status**

**2016-051**

**MARTIN LUTHER KING JR. PARK**

**Stanford White**

**CD 10-01-00-17**

**Plot Time:** 6/20/2017 3:19:33 PM
## Plumbing Fixture Schedule

<table>
<thead>
<tr>
<th>Code</th>
<th>Item</th>
<th>Description</th>
<th>fixture</th>
<th>remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-3A</td>
<td>YES WATER FOUNTAIN</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P-4</td>
<td>MOP RECEPTOR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P-1</td>
<td>WATER CLOSET</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P-1A</td>
<td>YES WATER CLOSET</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P-2A</td>
<td>YES LAVATORY</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P-5</td>
<td>FLOOR DRAIN ZURN MODEL ZN415S, 6&quot; x 6&quot; FLOOR/SHOWER DRAIN, DURA-COATED CAST IRON BODY, MEMBRANE CLAMP WITH ADJUSTABLE COLLAR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P-8</td>
<td>FLOOR DRAIN ZURN MODEL Z540, 12&quot; DIAMETER FLOOR DRAIN, DURA-COATED CAST IRON BODY, MEMBRANE CLAMP WITH ADJUSTABLE COLLAR</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Domestic Water Heater Schedule

<table>
<thead>
<tr>
<th>Model</th>
<th>Capacity (gal)</th>
<th>Temperature Setting (F)</th>
<th>Recovery (°F)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>DWH-1</td>
<td>30</td>
<td>120</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Plumbing Supply Schedule

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Supply Type</th>
<th>Material</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAVATORY SUPPLIES</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BACKFLOW PREVENTER</td>
<td>BRONZE CASING, NICKEL BRONZE BOX AND HINGED COVER WITH OPERATING KEY LOCK AND &quot;WATER&quot; CASTING ---</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
1. Coordinate work with other trades prior to purchase and installation of any piping, valves, and equipment. Coordinate the HVAC system with the architectural plans. Do not install the HVAC system until the architectural plans are complete and approved.

2. Refer to the mechanical drawings for locations of all mechanical items. Refer to the architectural reflected ceiling plans and architectural details for exact locations of all installing mechanical or architectural details.

3. Ensure that all fittings required to complete work are furnished and installed. Coordinate the duct and piping layout with all necessary and required to complete work. Coordinate the duct and piping layout with all necessary and required to complete work. Coordinate the duct and piping layout with all necessary and required to complete work. Coordinate the duct and piping layout with all necessary and required to complete work. Coordinate the duct and piping layout with all necessary and required to complete work.

4. Refer to the architectural plans for dimensions. Do not scale these drawings.

5. Avoid lights, conduit and miscellaneous piping, but low enough to allow for easy access and shapes of equipment that are the true intent and meaning of the plans and specifications. See plans and specifications.

6. Coordinate locations and elevations of all proposed mechanical items with architectural plans and elevations. Ensure all items furnished will fit in the space available. Make necessary field measurements to ascertain space requirements and furnish and install such sizes and shapes of equipment that are the true intent and meaning of the plans and specifications.

7. Coordinate exact size and location of all equipment to allow for easy access and shapes of equipment that are the true intent and meaning of the plans and specifications. See plans and specifications.

8. Provide balancing dampers wherever required on the plans and scale for system balancing.

9. Refer to the mechanical reflector to the architectural drawings for locations of all mechanical items. Refer to the architectural reflected ceiling plans and architectural details for exact locations of all installing mechanical or architectural details.

10. Coordinate the HVAC system with the architectural plans. Do not install the HVAC system until the architectural plans are complete and approved.

11. Coordinate work with other trades prior to purchase and installation of any piping, valves, and equipment. Coordinate the HVAC system with the architectural plans. Do not install the HVAC system until the architectural plans are complete and approved.
KEY NOTES TO H101:

1. WALL MOUNT ELECTRIC CONVECTOR. MOUNT TOP OF UNIT AS HIGH AS POSSIBLE WHILE MAINTAINING MANUFACTURER RECOMMENDED CLEARANCE TO CEILING. ADVISE ENGINEER IF GREATER THAN 18".
2. PUMP HOUSE CONVECTION HEATER. SEE DETAIL. MOUNT AP PROXIMATELY 48" AFF (FIELD VERIFY TO AVOID PLUMBING).
3. HORIZONTAL DISCHARGE UNIT HEATER. MOUNT TOP OF WALL BRACKET 9'-4" AFF. SEE DETAIL.
4. THERMOSTAT 72" AFF. TAMPER PROOF BLANK COVER. REFER TO CONTROLS DETAIL.
5. THERMOSTAT 72" AFF. WIRE CAGE COVER.
6. 18" x 8" WALL CAP. STEEL CONSTRUCTION WITH BLACK ENAMEL FINISH. BUILT-IN BIRDSCREEN AND DAMPER. BASIS OF DESIGN: GREENHECK MODEL WC-8x8.

FAN SCHEDULE

<table>
<thead>
<tr>
<th>DESIGNATION</th>
<th>SERVICE TYPE</th>
<th>AIRFLOW (CFM)</th>
<th>FAN ESP (IN)</th>
<th>DRIVEN TYPE</th>
<th>FAN SPEED (RPM)</th>
<th>MOTOR SIZE (HP)</th>
<th>VOLTAGE/PHASE</th>
<th>MAX SOUND LEVEL (SONES)</th>
<th>DAMPER TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXH-1</td>
<td>TOILETS IN-LINE</td>
<td>400</td>
<td>0.40</td>
<td>DIRECT</td>
<td>1500</td>
<td>1/6</td>
<td>120/1</td>
<td>5 BACKDRAFT</td>
<td></td>
</tr>
<tr>
<td>EXH-2</td>
<td>STORAGE IN-LINE</td>
<td>400</td>
<td>0.25</td>
<td>DIRECT</td>
<td>1500</td>
<td>1/6</td>
<td>120/1</td>
<td>5 BACKDRAFT</td>
<td></td>
</tr>
</tbody>
</table>

UNIT HEATER SCHEDULE

<table>
<thead>
<tr>
<th>DESIGNATION</th>
<th>SERVICE TYPE</th>
<th>TEMP RISE (F)</th>
<th>ELEC COIL</th>
<th>FAN</th>
<th>NOTES</th>
<th>CAPACITY (kW)</th>
<th>VOLTAGE/PHASE</th>
<th>FAN AIRFLOW (CFM)</th>
<th>FAN MOTOR SIZE (HP)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>UH-1</td>
<td>HANDWASHING ELECTRIC CONVECTOR</td>
<td>-1.5</td>
<td>120/1</td>
<td>N/A</td>
<td>N/A</td>
<td>1, 3, 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UH-2</td>
<td>HANDWASHING ELECTRIC CONVECTOR</td>
<td>-1.5</td>
<td>120/1</td>
<td>N/A</td>
<td>N/A</td>
<td>1, 3, 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UH-3</td>
<td>STALL ELECTRIC CONVECTOR</td>
<td>-0.4</td>
<td>120/1</td>
<td>N/A</td>
<td>N/A</td>
<td>1, 3, 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>UH-4</td>
<td>STALL ELECTRIC CONVECTOR</td>
<td>-0.4</td>
<td>120/1</td>
<td>N/A</td>
<td>N/A</td>
<td>1, 3, 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UH-5</td>
<td>ADA STALL ELECTRIC CONVECTOR</td>
<td>-0.75</td>
<td>120/1</td>
<td>N/A</td>
<td>N/A</td>
<td>1, 3, 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UH-6</td>
<td>ADA STALL ELECTRIC CONVECTOR</td>
<td>-0.75</td>
<td>120/1</td>
<td>N/A</td>
<td>N/A</td>
<td>1, 3, 4</td>
<td></td>
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<tr>
<td>UH-7</td>
<td>UTILITY PUMP HOUSE CONVECTOR</td>
<td>-0.5</td>
<td>120/1</td>
<td>N/A</td>
<td>N/A</td>
<td>4, 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UH-8</td>
<td>STORAGE HORIZONTAL FAN FORCED UNIT HEATER</td>
<td>26</td>
<td>3.3</td>
<td>240/1</td>
<td>400</td>
<td>2, 3, 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UH-9</td>
<td>STORAGE HORIZONTAL FAN FORCED UNIT HEATER</td>
<td>26</td>
<td>3.3</td>
<td>240/1</td>
<td>400</td>
<td>2, 3, 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NOTES:

1. PROVIDE WITH WALL CAP.
2. EXH-2: PROVIDE WITH GALVANIZED FRAME, WELDED WIRE INLET GUARD.
3. UH1-7 BASIS OF DESIGN: BERKO UCJ.
4. UH8-9 BASIS OF DESIGN: MARKEL UH SERIES.
5. PROVIDE WITH INTEGRAL DISCONNECT.
6. PROVIDE WITH INTEGRAL THERMOSTAT.
7. BASIS OF DESIGN: MARKEL RPH SERIES.
### Table 3 - Working Clearances

<table>
<thead>
<tr>
<th>Height</th>
<th>Right</th>
<th>Left</th>
<th>Top</th>
<th>Bottom</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-150</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

WHERE THE CONDITIONS ARE AS FOLLOWS:
- EXPOSED LIVE PARTS ON ONE SIDE AND GROUNDED PARTS ON THE OTHER SIDE OF THE WORKING SPACE AND NO LIVE OR GROUNDED PARTS ON THE OTHER SIDE.
- EXPOSED LIVE PARTS ON ONE SIDE AND GROUNDED PARTS ON THE OTHER SIDE.
- EXPOSED LIVE PARTS ON BOTH SIDES OF THE WORKING SPACE.
- ANY ELECTRICAL CONSTRUCTION OR CONNECTIONS IN THE WORKING SPACE.
- ANY ELECTRICAL CONSTRUCTION OR CONNECTIONS IN THE WORKING SPACE.
- ANY ELECTRICAL CONSTRUCTION OR CONNECTIONS IN THE WORKING SPACE.

### NOTES
- GUARDED AS PROVIDED IN CONDITION 1), WITH THE OPERATOR GUARDED BY SUITABLE WOOD OR OTHER INSULATING MATERIALS. MATERIALS PACKED OR ISOLATED MATERIALS. MATERIALS PACKED OR ISOLATED MATERIALS. MATERIALS PACKED OR ISOLATED MATERIALS.
- EQUIPMENT CONTINUES THROUGH EXPOSED LIVE PARTS ON ONE SIDE AND NO LIVE OR GROUNDED PARTS ON THE OTHER SIDE.
KEY NOTES TO END

1. PROPOSED LOCATION OF UTILITY TRANSFORMER - COORDINATE EXACT LOCATION WITH UTILITY COMPANY.

NOTE: DO NOT USE FOR CONSTRUCTION

REVIEW DRAWING CD

SCALE: 1" = 40'-0"

SITE PLAN - ELECTRICAL

MARTIN LUTHER KING JR. PARK TOWN OF CARRBORO
KEY NOTES TO E102

1. Connect photocell and switch in series such that both switches need to be in the top position to energize the light fixture.

SCALE: 1/4" = 1'-0"
1. Exposed live parts on one side and no live or "J" box on the other side.

2. Consider live parts operator between electrical equipment as working space in front of space, or exposed live parts on both sides.

3. General notes:
   - 1. Electrical work labels on every project panelboard.
   - 2. Motor starter/disconnect or combination starter/disconnect. A combination starter/disconnect is required in 2" wide or wider.
   - 3. Label color to be clear with black lettering.
   - 4. Labels to be size 2 in.

4. Dedicated space for electrical equipment

5. Working clearances for electrical equipment

6. Electrical connections to equipment of other trades

7. Notes:
   - Equipment provided and installed by other contractor.
   - Panelboard is not acceptable.
   - Notes to be sized 2 in.
   - General notes to be made by electrical contractor.

8. General notes:
   - 1. Insert supplying panel designation here.
   - 2. Insert voltage where X's are indicated.
   - 3. Possible notes to be made.
   - 4. Equipment where required by code.

9. Mechanical unit wiring details

10. Panelboard label

11. Notes to design:
   - 1. This figure illustrates the dedicated space for electrical equipment.
   - 2. This figure illustrates the dedicated space for electrical equipment.

12. Electrical connections to equipment of other trades

13. Notes:
   - Equipment provided and installed by other contractor.
   - Panelboard is not acceptable.
   - Notes to be sized 2 in.
   - General notes to be made by electrical contractor.

14. General notes:
   - 1. Insert supplying panel designation here.
   - 2. Insert voltage where X's are indicated.
   - 3. Possible notes to be made.
   - 4. Equipment where required by code.
### Town of Carrboro MLK Jr. Park

**Phase:** 95% CD Submittal

22-Jun-17

**Preliminary Opinion of Probable Construction Cost - with phasing**

This is an estimate based upon the most current costs available. This estimate is provided for planning purposes only. A certified estimate should be obtained for use in bidding and construction.

<table>
<thead>
<tr>
<th>Construction Item</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction Survey</td>
<td>$6,000.00</td>
</tr>
<tr>
<td>Construction Entrance</td>
<td>$2,700.00</td>
</tr>
<tr>
<td>Demolition - curb and gutter at driveway entrance</td>
<td>$598.50</td>
</tr>
<tr>
<td><strong>221113 Water - budget</strong></td>
<td><strong>$51,328.00</strong></td>
</tr>
<tr>
<td>1-1/2&quot; copper water line</td>
<td></td>
</tr>
<tr>
<td>1-1/2&quot; Valve</td>
<td></td>
</tr>
<tr>
<td>1-1/2&quot; x 12&quot; Tapping Sleeve</td>
<td></td>
</tr>
<tr>
<td>2&quot; x 6&quot; Tee</td>
<td></td>
</tr>
<tr>
<td>^&quot; x 8&quot; Reducer</td>
<td></td>
</tr>
<tr>
<td>Water Appurtenances and Backflow</td>
<td></td>
</tr>
<tr>
<td>Pavement Repair (remove and replace)</td>
<td></td>
</tr>
<tr>
<td>1-1/2&quot; Water Meter - impact fee</td>
<td></td>
</tr>
<tr>
<td>1-1/2&quot; Meter Installation</td>
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</tr>
<tr>
<td>Water Main Tap</td>
<td></td>
</tr>
<tr>
<td>Quick Coupler valve to assist with irrigation</td>
<td></td>
</tr>
<tr>
<td>Fire Hydrant</td>
<td></td>
</tr>
<tr>
<td><strong>221313 Sewer</strong></td>
<td><strong>$56,580.00</strong></td>
</tr>
<tr>
<td>4&quot; PVC Sewer Line</td>
<td></td>
</tr>
<tr>
<td>4&quot; DIP Sewer Line</td>
<td></td>
</tr>
<tr>
<td>Tie to Ex. Manhole</td>
<td></td>
</tr>
<tr>
<td>Cleanouts</td>
<td></td>
</tr>
<tr>
<td>Curb remove and repair</td>
<td></td>
</tr>
<tr>
<td>Sewer impact fee (1.5&quot; meter)</td>
<td></td>
</tr>
<tr>
<td>Road Pavement remove and repair</td>
<td></td>
</tr>
<tr>
<td><strong>311000 Site Clearing</strong></td>
<td><strong>$12,750.00</strong></td>
</tr>
<tr>
<td>Clearing and Grubbing - add'l for pump track</td>
<td></td>
</tr>
<tr>
<td>Topsoil Removal and Stockpiling</td>
<td></td>
</tr>
<tr>
<td><strong>312000 Earth Moving</strong></td>
<td><strong>$20,420.00</strong></td>
</tr>
<tr>
<td>Rough Grading (cut/fill on site)</td>
<td></td>
</tr>
<tr>
<td>Fine Grade</td>
<td></td>
</tr>
<tr>
<td>import (plan on balancing on site)</td>
<td></td>
</tr>
<tr>
<td>Respread Topsoil (4&quot;) (landscaped areas)</td>
<td></td>
</tr>
<tr>
<td><strong>312040 Erosion &amp; Sediment Control</strong></td>
<td><strong>$21,495.00</strong></td>
</tr>
<tr>
<td>Silt Fence</td>
<td></td>
</tr>
<tr>
<td>Tree Protection Fence</td>
<td></td>
</tr>
<tr>
<td>temporary rock dam</td>
<td></td>
</tr>
<tr>
<td>Silt Fence Outlet</td>
<td></td>
</tr>
<tr>
<td>Temporary Diversion Ditch</td>
<td></td>
</tr>
</tbody>
</table>
## Town of Carrboro MLK Jr. Park
**Phase:** 95% CD Submittal  
22-Jun-17

### Preliminary Opinion of Probable Construction Cost - with phasing

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<table>
<thead>
<tr>
<th>Construction Item</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temporary Seeding</td>
<td></td>
</tr>
<tr>
<td>Seeding stabilization</td>
<td></td>
</tr>
<tr>
<td>Temporary Sediment Basin</td>
<td></td>
</tr>
<tr>
<td><strong>32116 Asphalt Pavement and signage</strong></td>
<td><strong>$26,198.66</strong></td>
</tr>
<tr>
<td>Parking Lot Surface Course - 2&quot; (9.5B) - 12,934 sf</td>
<td></td>
</tr>
<tr>
<td>Roadway Base Course (6&quot; ABC) - 12,934 sf</td>
<td></td>
</tr>
<tr>
<td>Parking Stall Striping</td>
<td></td>
</tr>
<tr>
<td>Striping at Handicap Space</td>
<td></td>
</tr>
<tr>
<td>Painted Markings (Stop Bars)</td>
<td></td>
</tr>
<tr>
<td>Directional Arrows</td>
<td></td>
</tr>
<tr>
<td>Handicap Signs</td>
<td></td>
</tr>
<tr>
<td>Crosswalk Striping Allowance</td>
<td></td>
</tr>
<tr>
<td>Misc. Regulatory &amp; Informational Signage</td>
<td></td>
</tr>
<tr>
<td><strong>Decomposed Granite Path</strong></td>
<td><strong>$43,200.00</strong></td>
</tr>
<tr>
<td>Decomposed Granite Path</td>
<td></td>
</tr>
<tr>
<td>add’l path connection to pump tracks - approx. 500 lf</td>
<td></td>
</tr>
<tr>
<td>Natural Stabilizer for all</td>
<td></td>
</tr>
<tr>
<td><strong>321313 Cast-In-Place Concrete</strong></td>
<td><strong>$49,029.00</strong></td>
</tr>
<tr>
<td>Concrete Wheel Stops</td>
<td></td>
</tr>
<tr>
<td>seat walls at amphitheater - cast in place with stone veneer</td>
<td></td>
</tr>
<tr>
<td>Concrete Sidewalk (4&quot; Thick)</td>
<td></td>
</tr>
<tr>
<td>concrete pad for picnic shelters - 2190 sf (2)</td>
<td></td>
</tr>
<tr>
<td>concrete pad for add alt shelter and amphitheater - 1580 sf</td>
<td></td>
</tr>
<tr>
<td><strong>329200 Lawns &amp; Grasses</strong></td>
<td><strong>$8,775.00</strong></td>
</tr>
<tr>
<td>Turfgrass Seeding (Bermuda)</td>
<td></td>
</tr>
<tr>
<td>Pollination, Perennial and Wetland Garden seed mixes</td>
<td></td>
</tr>
<tr>
<td>Switch Grass for stormwater Wetland</td>
<td></td>
</tr>
<tr>
<td><strong>329300 Plants</strong></td>
<td><strong>$38,625.00</strong></td>
</tr>
<tr>
<td>Large Deciduous Canopy Trees - 4&quot;caliper</td>
<td></td>
</tr>
<tr>
<td>Evergreen Canopy Trees - 2.5&quot;, 8'</td>
<td></td>
</tr>
<tr>
<td>Deciduous Canopy Trees - 2.5&quot;</td>
<td></td>
</tr>
<tr>
<td>Understory Trees - 2.5&quot;</td>
<td></td>
</tr>
<tr>
<td>Large Shrubs</td>
<td></td>
</tr>
<tr>
<td>Perennial Plugs</td>
<td></td>
</tr>
<tr>
<td><strong>334100 Storm Drainage - Budget</strong></td>
<td><strong>$49,731.60</strong></td>
</tr>
<tr>
<td>Wetland Riser</td>
<td></td>
</tr>
<tr>
<td>Wetland topsoil</td>
<td></td>
</tr>
<tr>
<td>RCP Drain Line - 18&quot; Class III</td>
<td></td>
</tr>
</tbody>
</table>
## Preliminary Opinion of Probable Construction Cost - with phasing

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<table>
<thead>
<tr>
<th>Construction Item</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>FES</td>
<td></td>
</tr>
<tr>
<td>RipRap - Class A</td>
<td></td>
</tr>
<tr>
<td>Rainwater Harvesting Cisterns</td>
<td></td>
</tr>
<tr>
<td><strong>Greenroof - add alt on amphitheater</strong></td>
<td></td>
</tr>
<tr>
<td>underdrains at playground (stone and pipe)</td>
<td></td>
</tr>
<tr>
<td><strong>Buildings</strong> $675,000.00</td>
<td></td>
</tr>
<tr>
<td>Restroom &amp; Storage</td>
<td></td>
</tr>
<tr>
<td>Amphitheatre structure</td>
<td></td>
</tr>
<tr>
<td>Large Picnic Shelter</td>
<td></td>
</tr>
<tr>
<td>Small Picnic Shelter</td>
<td></td>
</tr>
<tr>
<td>Garden storage &amp; Shelter</td>
<td></td>
</tr>
<tr>
<td><strong>Playground</strong> $61,700.00</td>
<td></td>
</tr>
<tr>
<td>Misc. Mulch and edging</td>
<td></td>
</tr>
<tr>
<td>embankment slide</td>
<td></td>
</tr>
<tr>
<td>slide misc rocks</td>
<td></td>
</tr>
<tr>
<td>climbing structures</td>
<td></td>
</tr>
<tr>
<td>water play</td>
<td></td>
</tr>
<tr>
<td>log balance (wood onsite)</td>
<td></td>
</tr>
<tr>
<td>climbing logs (wood onsite)</td>
<td></td>
</tr>
<tr>
<td>see saw (wood onsite)</td>
<td></td>
</tr>
<tr>
<td>birds nest swing (gametime)</td>
<td></td>
</tr>
<tr>
<td>hopping logs</td>
<td></td>
</tr>
<tr>
<td>climbing boulder (game time u-play sandstone med)</td>
<td></td>
</tr>
<tr>
<td>willow tunnel</td>
<td></td>
</tr>
<tr>
<td>playground installation and delivery allowance</td>
<td></td>
</tr>
<tr>
<td><strong>Pump Track</strong> $3,555.87</td>
<td></td>
</tr>
<tr>
<td>Sand</td>
<td></td>
</tr>
<tr>
<td>Clay</td>
<td></td>
</tr>
<tr>
<td>underdrains (stone and pipe)</td>
<td></td>
</tr>
<tr>
<td>Grading and shaping</td>
<td></td>
</tr>
<tr>
<td><strong>Misc. Site Amenities</strong> $74,855.00</td>
<td></td>
</tr>
<tr>
<td>Exercise Station - phase one</td>
<td></td>
</tr>
<tr>
<td>Exercise Station - phase two</td>
<td></td>
</tr>
<tr>
<td>Exercise Station Sign - phase one</td>
<td></td>
</tr>
<tr>
<td>Exercise Station Sign - phase two</td>
<td></td>
</tr>
<tr>
<td>Bench</td>
<td></td>
</tr>
<tr>
<td>Bollard (permanent/lit)</td>
<td></td>
</tr>
<tr>
<td>Water Fountain (dual level)</td>
<td></td>
</tr>
</tbody>
</table>
Town of Carrboro MLK Jr. Park  
Phase: 95% CD Submittal  
22-Jun-17  
**Preliminary Opinion of Probable Construction Cost - with phasing**  
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<table>
<thead>
<tr>
<th>Construction Item</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trash Receptacle</td>
<td></td>
</tr>
<tr>
<td>Grill</td>
<td></td>
</tr>
<tr>
<td>inverted U Bike Rack</td>
<td></td>
</tr>
<tr>
<td>Handrail at ramps, stairs, bridge, etc.</td>
<td></td>
</tr>
<tr>
<td>Dog Waste Stations</td>
<td></td>
</tr>
<tr>
<td>Educational Signage</td>
<td></td>
</tr>
<tr>
<td>Little Free Library (donation)</td>
<td></td>
</tr>
<tr>
<td>Picnic Table</td>
<td></td>
</tr>
<tr>
<td>addl fence at garden (screening)</td>
<td></td>
</tr>
<tr>
<td>fence around back of pump track (chain link)</td>
<td></td>
</tr>
<tr>
<td>double vehicular gate at garden</td>
<td></td>
</tr>
<tr>
<td>Grass Pavers with sub-base</td>
<td></td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>$ 1,202,541.63</strong></td>
</tr>
<tr>
<td>5% Mobilization</td>
<td><strong>$ 60,127.08</strong></td>
</tr>
<tr>
<td>5% Contingency</td>
<td><strong>$ 60,127.08</strong></td>
</tr>
<tr>
<td><strong>TOTAL OPINION OF COST (with contingency)</strong></td>
<td><strong>$ 1,322,795.79</strong></td>
</tr>
<tr>
<td><strong>TOTAL PROJECT FUNDING</strong></td>
<td><strong>$ 1,200,000.00</strong></td>
</tr>
<tr>
<td><strong>DIFFERENCE</strong></td>
<td><strong>($122,795.79)</strong></td>
</tr>
<tr>
<td><strong>PHASE ONE (pre-contingency and mobilization)</strong></td>
<td><strong>$ 1,043,466.63</strong></td>
</tr>
<tr>
<td><strong>PHASE TWO (pre-contingency and mobilization)</strong></td>
<td><strong>$159,075.00</strong></td>
</tr>
</tbody>
</table>

PHASE TWO
100% PLAN RENDERING - PROPOSED PHASING

MLK JR PARK | CARRBORO, NC
100% CD : ILLUSTRATIVE RENDERING - OPTION A