

RIVERVIEW RESTROOMS

SITE PLAN AMENDMENT

CHARLOTTESVILLE, VIRGINIA

SCOPE OF WORK:

THIS PROJECT GENERALLY CONSISTS OF ANCILLARY SITE WORK AND PROPOSED UTILITY CONNECTIONS THAT SUPPORT THE INSTALLATION OF A NEW MODULAR RESTROOM FACILITY ON CITY PROPERTY (RIVERVIEW PARK).

PROJECT SUMMARY

NAME OF PROJECT: RIVERVIEW RESTROOMS

PROJECT ADDRESS: 280-284 RIVERSIDE AVENUE
CHARLOTTESVILLE, VA 22902

DEVELOPMENT TYPE: BY-RIGHT

APPLICANT/OWNER:

CONTACT: DANIEL MCCLUNG
CHARLOTTESVILLE PARKS AND RECREATION
ADDRESS: 1300 PENN PARK ROAD
CHARLOTTESVILLE, VA 22901
PHONE: 434-970-3656
EMAIL: MCCLUNG@CHARLOTTESVILLE.ORG

ENGINEER OF RECORD:

CONTACT: LINE AND GRADE CIVIL ENGINEERING
DANIEL C. HYER, PE
ADDRESS: 113 4TH STREET NE, STE 100
CHARLOTTESVILLE, VA 22902
PHONE: 434-262-0169
EMAIL: DHYER@LINE-GRADE.COM

SOURCE OF SURVEY AND TOPOGRAPHY:

SOURCE: ACTUAL GROUND SURVEY (SEE SHEET C0.1 FOR BENCHMARK)
CONTACT: DRAPER ADEN ASSOCIATES
CHERYL STOCKTON
ADDRESS: 110 AVON STREET
CHARLOTTESVILLE, VA 22902
PHONE: 434-295-0700
EMAIL: CSTOCKTON@DAA.COM

PARCELS:

PARCEL ID: 55A151000
OWNER: CITY OF CHARLOTTESVILLE
CONTACT: SEE ABOVE
ZONED: R-1S
OVERLAYS: PUBLIC PARK PROTECTION
USE: PUBLIC PARK
LEGAL AREA: 26.60 AC

PROPOSED SITE PLAN REQUIREMENTS

ALLOWED OR REQ'D

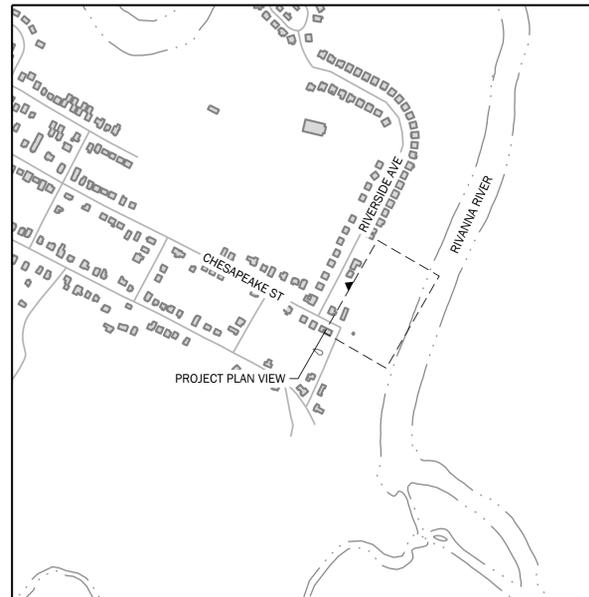
BUILDING HEIGHT:		
MAX HEIGHT ALLOWED =		35 FT
EXISTING BUILDING HEIGHT =		0 FT
PROPOSED BUILDING HEIGHT =		9.67 FT

SETBACKS:		
Sec. 34-353(a) PRIMARY STREET MIN FRONT BUILDING SETBACK =		25 FT
SIDE BUILDING SETBACK (NON-RESIDENTIAL USES) =		50 FT
REAR BUILDING SETBACK (NON-RESIDENTIAL USES) =		50 FT

BUILDING FOOTPRINTS:		
EXISTING BUILDINGS		
EXISTING BUILDING		0 SF
EXISTING BUILDING TOTALS		0 SF
PROPOSED BUILDINGS		
PROPOSED BUILDING		187 SF
PROPOSED BUILDING TOTALS		187 SF



VICINITY MAP
SCALE: 1" = 4000'



LOCATION MAP
SCALE: 1" = 500'



DESIGN INFORMATION:

DESIGN MANUALS REFERENCED:
CITY OF CHARLOTTESVILLE STANDARDS AND DESIGN MANUAL
ASCE 24 FLOOD RESISTANT DESIGN AND CONSTRUCTION

ADDITIONAL INFORMATION:
DISTURBANCE AREA: 0.118 AC (5,145 SF)
MISS UTILITY TICKET #: SEE SHEET X0.0
BUILDING FLOOD DESIGN CLASS 1 (ASCE 24 TABLE 1-1)

SHEET LIST TABLE

SHEET NUMBER	SHEET TITLE
C0.0	Title Sheet
C0.1	General Notes
C0.2	Legend and Site Calculations
C1.0	Demolition Plan
C1.1	Demolition Details
C2.0	Site Plan
C2.1	Utility Plan and Profiles
C2.2	Site and Utility Details
C3.0	Modular Bathroom Details
X0.0	Survey
T-1	MEP Plans - Title Sheet
P-1	MEP Plans - Sanitary Sewer Controls Plan, Notes and Details
12	TOTAL SHEETS

SUBMITTAL LOG

SUBMISSION	DESCRIPTION	RECIPIENT	SUBMITTAL DATE
1	1ST SUBMISSION	NEIGHBORHOOD DEVELOPMENT SERVICES	11/6/2020
2	2ND SUBMISSION	NEIGHBORHOOD DEVELOPMENT SERVICES	9/3/2021
3	3RD SUBMISSION (APPROVED)	NEIGHBORHOOD DEVELOPMENT SERVICES	4/7/2022
4	BID SET	CITY PARKS DEPT.	1/19/2023
5	BID SET (SMALLER BUILDING)	CITY PARKS DEPT.	02/02/2024

LINE + GRADE
CIVIL ENGINEERING

RIVERVIEW RESTROOMS
SITE PLAN AMENDMENT
CHARLOTTESVILLE, VIRGINIA

TITLE SHEET



APPROVED DCH

SUBMISSION NO. 5

PROJECT 2001002

THE WORK OF
LINE + GRADE

C0.0

GENERAL CONSTRUCTION NOTES:

- THIS SITE PLAN APPROVAL SHOULD NOT BE CONSTRUED OR INTERPRETED AS THE CITY'S VERIFICATION THAT THE SITE PLAN FULLY COMPLIES WITH ALL REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT.
- ALL CONSTRUCTION METHODS AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE STANDARDS AND SPECIFICATIONS (VDOT RBS&S), VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, THE RULES AND REGULATIONS WATER AND SANITARY SEWER CONSTRUCTION SPECIFICATIONS AND STANDARDS FOR THE PLAN APPROVING AUTHORITY AND ANY OTHER APPLICABLE FEDERAL, STATE, OR LOCAL ORDINANCES, CODES, AND LAWS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL CONDITIONS, MATERIALS, DIMENSIONS LOCATIONS AND EXISTING ELEMENTS TO REMAIN IN THE FIELD BEFORE PROCEEDINGS WITH ANY WORK. IF CONDITIONS VARY FROM WHAT IS REPRESENTED IN THE DRAWINGS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER.
- EXISTING CONSTRUCTION SHOWN IN THESE DRAWINGS SHALL BE USED AS RELATIVE REFERENCES AND ARE TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR IF DEEMED CRITICAL FOR PROPER EXECUTION OF THE WORK.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DUST CONTROL MEASURES.
- PROVIDE ADEQUATE PROTECTION FOR THE EXISTING BUILDINGS, BUILDING OCCUPANTS, VEHICLES AND PEDESTRIANS AT ALL TIMES IN ACCORDANCE WITH OSHA AND ALL APPLICABLE STATE AND LOCAL CODES.
- MATERIALS AND EQUIPMENT SHALL BE STORED IN APPROVED AREAS TO PREVENT IMPACTS ON VEHICLES AND PEDESTRIANS. CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR MEASURES TAKEN TO ENSURE VEHICULAR AND PEDESTRIAN SAFETY THROUGH THE ENTIRE DURATION OF THE WORK. SAFETY IS PARAMOUNT.
- EQUIPMENT AND MATERIALS SHALL BE STORED IN DESIGNATED AREAS AND SHALL NOT ENCUMBER THE OWNER'S OPERATIONS, SURROUNDING RIGHT OF WAY, OR ADJOINING GROUNDS.
- ALL WORK AREAS SHALL BE CLEANED DAILY.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF BUILDINGS ADJACENT TO WORK AREAS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS OF DAMAGES RESULTING FROM CONSTRUCTION ACTIVITIES.
- SECTION CUTS AND DETAIL CALLOUTS INDICATED IN THE DRAWINGS ARE TYPICAL FOR THE PROJECT. THEY ARE TO BE CONSIDERED TYPICAL FOR SIMILAR CONDITIONS AND HAVE NOT BEEN SHOWN EVERYWHERE THEY APPLY.
- CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR JOB SITE SAFETY.
- CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ALL CONSTRUCTION.
- SYMBOLS IN THE DRAWINGS ARE NOT TO SCALE.
- ALL WORK SHALL BE LAID-OUT PRIOR TO INSTALLATION OF NEW WORK BASED ON MEASUREMENT OF EXISTING CONSTRUCTION AND EXISTING CONSTRUCTION DESIGNATED TO REMAIN AS PART OF THE PROJECT. DO NOT START INSTALLATION OF WORK UNTIL LAY-OUT IS COMPLETE AND POTENTIAL CONFLICTS HAVE BEEN IDENTIFIED AND ADDRESSED.
- THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ALL DAMAGE TO THE EXISTING BUILDINGS AND ADJACENT GROUNDS AND PROPERTY CAUSE BY THE CARELESSNESS OR NEGLIGENCE OF HIS WORKMEN. DAMAGE TO PORTIONS OF THE PROPERTY NOT SUBJECT TO WORK UNDER THE CONTRACT SHALL BE REPAIRED TO THE FULL SATISFACTION OF THE OWNER AND ENGINEER, AT THE CONTRACTOR'S EXPENSE.
- PROTECTION OF THE WORK: PROTECT EFFECTIVELY ALL MATERIALS AND EQUIPMENT DURING THE ENTIRE PERIOD OF CONSTRUCTION. REPLACE MATERIALS AND EQUIPMENT DAMAGED, LOST OR STOLEN WITHOUT ADDITIONAL COST TO THE OWNER.
- PROTECT EXISTING MATERIALS DURING INSTALLATION OF TEMPORARY PROTECTION AND CONSTRUCTION. DO NOT DEFACE OR REMOVE EXISTING MATERIALS IF INTENDED TO STAY. ATTACHMENTS OF TEMPORARY PROTECTION TO EXISTING CONSTRUCTION SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
- OBTAIN ENGINEER REVIEW AND WRITTEN APPROVAL IN THE FORM OF A CONSTRUCTION CHANGE DIRECTIVE OR SUPPLEMENTAL INSTRUCTION BEFORE MAKING CHANGES OR ADDITIONS TO CONSTRUCTION OR REMOVING MATERIALS THAT WERE INTENDED TO REMAIN.
- NOTIFY ENGINEER OF VISIBLE CHANGES IN THE INTEGRITY OF MATERIALS OR COMPONENTS WHETHER DUE TO ENVIRONMENTAL CAUSES INCLUDING BIOLOGICAL ATTACK, UV DEGRADATION, FREEZING OR THAWING OR DUE TO STRUCTURAL DEFECTS INCLUDING CRACKS, MOVEMENT OR DISTORTION. DO NOT PROCEED WITH WORK IN QUESTION UNTIL DIRECTED BY THE ENGINEER.
- WHERE MISSING FEATURES ARE INDICATED TO BE REPAIRED OR REPLACED, PROVIDE FEATURES WHOSE DESIGNS ARE BASED ON ACCURATE DUPLICATIONS RATHER THAN ON CONJECTURAL DESIGNS, SUBJECT TO APPROVAL OF THE ENGINEER.
- WHERE WORK REQUIRES EXISTING FEATURES TO BE REMOVED, CLEANED AND REUSED, PERFORM THESE OPERATIONS WITHOUT DAMAGE TO THE MATERIALS THEMSELVES, TO ADJACENT MATERIALS, OR TO THE SUBSTRATE. WHEN CLEANING, MATCH SAMPLES OF EXISTING MATERIALS THAT HAVE BEEN CLEANED AND IDENTIFIED FOR ACCEPTABLE CLEANING LEVELS. AVOID OVER CLEANING TO PREVENT DAMAGE TO EXISTING MATERIALS DURING CLEANING.
- TEMPORARY MATERIALS MAY BE NEW OR USED, BUT MUST BE ADEQUATE IN FOR REQUIRED USAGE, MUST NOT CREATE UNSAFE CONDITIONS AND MUST NOT VIOLATE REQUIREMENTS OF APPLICABLE CODES AND STANDARDS.
- CONTRACTOR SHALL PROVIDE AND MAINTAIN ADEQUATE FIRE PROTECTION IN THE FORM OF FIRE EXTINGUISHER OR OTHER EFFECTIVE MEANS OF EXTINGUISHING FIRE, READY FOR INSTANT USE, DISTRIBUTED AROUND THE PROJECT AND IN AND ABOUT TEMPORARY, INFLAMMABLE STRUCTURES DURING CONSTRUCTION OF WORK. EXISTING FIRE HOSE CONNECTIONS SHALL BE ACCESSIBLE AT ALL TIMES BY FIRE DEPARTMENT PERSONNEL. MATERIAL SAND DEBRIS SHALL NOT BE STORED IN FRONT OF THE CONNECTION, THUS PREVENTING ACCESS. THE CONTRACTOR SHALL COORDINATE ACCESS PROCEDURES WITH THE FIRE MARSHALL.
- GASOLINE AND OTHER FLAMMABLE LIQUIDS SHALL BE STORED AND DISPENSED FROM UL LISTED SAFETY CONTAINERS IN CONFORMANCE WITH THE NATIONAL BOARD OF FIRE UNDERWRITERS' RECOMMENDATIONS.
- SUBMITTALS ARE NOT REQUIRED IF CONTRACTOR ELECTS TO USE THE PROPRIETARY PRODUCTS LISTED. SUBMITTALS WILL BE REQUIRED IF CONTRACTOR WISHES TO USE ALTERNATE PRODUCTS. ALL ALTERNATE PRODUCTS ARE SUBJECT TO REVIEW AND APPROVAL BY THE ENGINEER AND OWNER.
- CONTRACTOR SHALL CALL MISS UTILITY AT 1-800-552-7001 BEFORE CONSTRUCTION COMMENCES.
- TREE AND PLANT ROOTS OR BRANCHES THAT MAY INTERFERE WITH THE WORK SHALL BE TRIMMED OR CUT ONLY WITH THE APPROVAL OF THE OWNER AND ENGINEER. ANY TREES OR PLANTS WHICH ARE SHOWN TO REMAIN THAT DO NOT INTERFERE WITH THE WORK, BUT ARE DAMAGED BY CONTRACTOR OR HIS SUB-CONTRACTORS, SHALL BE REPLACED BY CONTRACTOR AT NO ADDITIONAL COST.

WORK AREA PROTECTION AND MAINTENANCE:

- CLEARING AND GRUBBING SHALL BE CONFINED TO THOSE AREAS NEEDED FOR CONSTRUCTION, AND AS SHOWN IN THE DRAWINGS.
- DISTURBED AREAS BEYOND THE ROADWAY CURB AND WHERE INDICATED ON THE PLANS SHALL RECEIVE TOPSOIL AS NECESSARY AND AS DIRECTED. SEEDING MIXTURE SHALL BE DETERMINED BY THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK SECTION 3.32
- CONTRACTOR IS PERMITTED TO WORK IN THE PUBLIC RIGHT-OF-WAY AND ANY TEMPORARY OR PERMANENT EASEMENT SHOWN ON THE PLANS. HOWEVER, CONTRACTOR SHALL NOTIFY PROPERTY OWNER(S) FORTY-EIGHT (48) HOURS PRIOR TO WORKING ON ANY PRIVATE PROPERTY TO COORDINATE ACCESS AND TO DETERMINE A STORAGE AREA FOR MATERIALS IF NEEDED. COORDINATION OF ACCESS TO PUBLIC RIGHT-OF-WAY AND STORAGE OF MATERIALS THEREON SHALL BE COORDINATED WITH THE ENGINEER. CONTRACTOR'S FAILURE TO NOTIFY AND COORDINATE WITH PROPERTY OWNERS AND/OR THE ENGINEER MAY RESULT IN DELAYS. NO ADDITIONAL COMPENSATION OR TIME FOR PERFORMANCE WILL BE GIVEN FOR ANY SUCH DELAYS.
- CONTRACTOR SHALL, AT HIS EXPENSE, MAINTAIN THE WORK SITE IN A CLEAN AND ORDERLY APPEARANCE AT ALL TIMES. ALL DEBRIS AND SURPLUS MATERIAL COLLECTED SHALL BE DISPOSED OF OFF THE WORK SITE BY CONTRACTOR, AT HIS EXPENSE.
- EXISTING LAWNS, TREES, SHRUBS, FENCES, UTILITIES, CULVERTS, WALLS, WALKS, DRIVEWAYS, POLES, SIGNS, RIGHT-OF-WAY MONUMENTS, MAILBOXES AND THE LIKE SHALL BE PROTECTED FROM DAMAGE DURING THE WORK. ANY DAMAGE CAUSED TO SUCH ITEMS SHALL BE REPAIRED OR REPLACED BY CONTRACTOR AT NO ADDITIONAL COST. PROPERTY PINS DISTURBED BY CONTRACTOR THAT ARE NOT SHOWN ON THE PLANS TO BE DISTURBED SHALL BE RESTORED BY LICENSED SURVEYOR AT THE CONTRACTOR'S EXPENSE.
- MEASURES TO CONTROL EROSION AND SEDIMENT SHALL BE PROVIDED PURSUANT TO AND IN COMPLIANCE WITH CURRENT FEDERAL, STATE AND LOCAL REGULATIONS. THE INFORMATION CONTAINED IN THE CONSTRUCTION PLANS AND/OR APPROVAL OF THE PLANS SHALL IN NO WAY RELIEVE THE CONTRACTOR OR HIS AGENT OF ANY LEGAL RESPONSIBILITY WHICH MAY BE REQUIRED BY THE CODE OF VIRGINIA OR ANY ORDINANCE ENACTED BY THE CITY OF CHARLOTTESVILLE. CONTRACTOR SHALL PROVIDE THE NECESSARY DIVERSION DITCHES, DIKES, OR TEMPORARY CULVERTS REQUIRED TO PREVENT MUD AND DEBRIS FROM BEING WASHED ONTO THE STREETS OR ADJACENT PROPERTY. CONTRACTOR'S VEHICLES SHALL BE KEPT CLEAN TO PREVENT MUD OR DUST FROM BEING DEPOSITED ON STREETS. NO AREA SHALL BE LEFT DENUDE FOR MORE THAN SEVEN (7) CALENDAR DAYS.
- CONTRACTOR SHALL CLEAN UP, RESTORE, SEED AND MAINTAIN ALL DISTURBED AREAS IMMEDIATELY UPON COMPLETION OF WORK. TOPSOIL SEED, FERTILIZER AND MULCH SHALL BE PLACED IN ACCORDANCE WITH CITY OF CHARLOTTESVILLE STANDARDS ON ALL DISTURBED AREAS. A PERMANENT STAND OF GRASS ADEQUATE TO PREVENT EROSION SHALL BE ESTABLISHED PRIOR TO FINAL ACCEPTANCE. ALL EROSION AND SEDIMENT CONTROLS SHALL BE REMOVED WITHIN 30 DAYS AFTER THE PROJECT IS STABILIZED. (MS-18)
- FOR FURTHER REQUIREMENTS AND DETAILS OF TREE PRESERVATION, PLANTING, EROSION AND SEDIMENT CONTROL, REFER TO THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.
- AN EROSION AND SEDIMENT CONTROL CERTIFIED RESPONSIBLE LAND DISTURBER (CRLD) IS REQUIRED FOR ALL LAND DISTURBANCE ACTIVITIES.
- THE CONTRACTOR SHALL PROPERLY INSTALL AND MAINTAIN EROSION AND SEDIMENT CONTROLS FOR THE LIFE OF THE PROJECT; AND ROUTINELY CHECK CONTROL DEVICES BEFORE, DURING AND AFTER STORM EVENTS.

UTILITIES:

- PRIOR TO CONSTRUCTION OR EXCAVATION, THE CONTRACTOR SHALL ASSUME RESPONSIBILITY OF LOCATING ANY AND ALL UNDERGROUND UTILITIES (PUBLIC OR PRIVATE) THAT MAY EXIST WITHIN OR CROSS THROUGH THE AREA OF CONSTRUCTION WHETHER OR NOT THEY ARE SHOWN ON THE PLANS. PRIOR TO ANY CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL CALL "MISS UTILITY OF VIRGINIA" AT 1-800-552-7001. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING, AT HIS SOLE EXPENSE, ANY EXISTING UTILITY DAMAGED DURING CONSTRUCTION.
- THE PLAN DOES NOT GUARANTEE THE EXISTENCE, NONEXISTENCE, SIZE, TYPE, LOCATION, ALIGNMENT, OR DEPTH OF ANY OR ALL UNDERGROUND UTILITIES OR OTHER FACILITIES. WHERE SURFACE FEATURES (MANHOLES, CATCH BASINS, VALVES, ETC.) ARE UNAVAILABLE OR INCONCLUSIVE, INFORMATION SHOWN MAY BE FROM UTILITY OWNERS' RECORDS AND/OR ELECTRONIC LINE TRACING, THE RELIABILITY OF WHICH IS UNCERTAIN. THE CONTRACTOR SHALL PERFORM TEST EXCAVATIONS OR OTHER INVESTIGATION AS NECESSARY TO VERIFY LOCATION AND CLEARANCES.
- WHEN THE WORK CROSSES EXISTING UTILITIES, THE EXISTING UTILITIES SHALL BE ADEQUATELY SUPPORTED AND PROTECTED FROM THE DAMAGE DUE TO THE WORK. ALL METHODS FOR SUPPORTING AND MAINTAINING THE EXISTING UTILITIES SHALL BE APPROVED BY THE RESPECTIVE UTILITY COMPANY AND/OR THE ENGINEER. CONTRACTOR SHALL EXERCISE CARE TO INSURE THAT THE GRADE AND ALIGNMENT OF EXISTING UTILITIES ARE MAINTAINED AND THAT NO JOINTS OR CONNECTIONS ARE DISPLACED. BACKFILL SHALL BE CAREFULLY PLACED AND COMPACTED TO PREVENT FUTURE DAMAGE OR SETTLEMENT TO EXISTING UTILITIES. ANY UTILITIES REMOVED AS PART OF THE WORK, AND NOT INDICATED TO BE REMOVED OR ABANDONED, SHALL BE RESTORED USING MATERIALS AND INSTALLATION EQUAL TO THE UTILITY'S STANDARDS.
- CONTRACTOR SHALL NOTIFY LANDOWNERS, TENANTS AND THE ENGINEER A MINIMUM OF 72 HOURS PRIOR TO THE INTERRUPTION OF ANY SERVICES. SERVICE INTERRUPTIONS SHALL BE KEPT TO A MINIMUM.
- CONTRACTOR TO MAKE ANY NECESSARY ADJUSTMENTS TO ALL UTILITY JUNCTION BOXES, VALVE BOXES, MANHOLES, CLEAN-OUTS, AND OTHER GRADE RELATED ITEMS IN SIDEWALK, ROADWAY, AND/OR ADJACENT AREAS TO MATCH FINISHED GRADE. COSTS ARE TO BE INCLUDED UNDER THE VARIOUS UNIT BID ITEMS. NO SEPARATE PAYMENT WILL BE MADE.
- PER THE VIRGINIA DEPARTMENT OF HEALTH WATERWORKS REGULATIONS (PART II, ARTICLE 3, SECTION 12 VAC 5-590 THROUGH 630), ALL BUILDINGS THAT HAVE THE POSSIBILITY OF CONTAMINATING THE POTABLE WATER DISTRIBUTION SYSTEM (HOSPITALS, INDUSTRIAL SITES, BREWERIES, ETC.) SHALL HAVE A BACKFLOW PREVENTION DEVICE INSTALLED WITHIN THE FACILITY. THIS DEVICE SHALL MEET SPECIFICATIONS OF THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE. SHALL BE TESTED IN REGULAR INTERVALS AS REQUIRED, AND TEST RESULTS SHALL BE SUBMITTED TO THE REGULATORY COMPLIANCE ADMINISTRATOR IN THE DEPARTMENT OF UTILITIES.
- ALL BUILDINGS THAT MAY PRODUCE WASTES CONTAINING MORE THAN ONE HUNDRED (100) PARTS PER MILLION OF FATS, OIL, OR GREASE SHALL INSTALL A GREASE TRAP. THE GREASE TRAP SHALL MEET SPECIFICATIONS OF THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE, MAINTAIN RECORDS OF CLEANING AND MAINTENANCE, AND BE INSPECTED ON REGULAR INTERVALS BY THE REGULATORY COMPLIANCE ADMINISTRATOR IN THE DEPARTMENT OF UTILITIES.
- CONTACT THE REGULATORY COMPLIANCE ADMINISTRATOR AT 970-3032 WITH ANY QUESTIONS REGARDING THE GREASE TRAP OR BACKFLOW PREVENTION DEVICES.

EARTH WORK AND SITE CONDITIONS:

- EXCEPT AS OTHERWISE SHOWN ON THE PLANS, ALL CUTS AND FILLS SHALL BE NO GREATER THAN 3:1.
- UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS, ALL FILL MATERIALS SHALL BE COMPACTED TO 95% OF THEORETICAL MAXIMUM DENSITY AS DETERMINED BY AASHTO T-99 METHOD A, WITHIN PLUS OR MINUS 2% OF OPTIMUM MOISTURE, FOR THE FULL WIDTH AND THE DEPTH OF THE FILL.
- THE CONTRACTOR SHALL ADD, CHANGE, OR RELOCATE EROSION AND SEDIMENT CONTROLS AT THE DIRECTION OF THE CITY OF CHARLOTTESVILLE E&S INSPECTOR TO THEIR SATISFACTION AT NO ADDITIONAL COST TO THE OWNER.
- ALL GRADING AND IMPROVEMENTS TO BE CONFINED TO THE PROJECT AREA UNLESS OTHERWISE INDICATED.
- PROPOSED GRADES SHALL BE FIELD ADJUSTED TO CONFORM TO THE INTENT OF THE TYPICAL SECTIONS. A SMOOTH GRADE SHALL BE MAINTAINED FROM THE BASELINE TO THE PROPOSED EDGE OF PAVEMENT OR FACE OF CURB TO PRECLUDE THE FORMING OF FALSE GUTTERS AND/OR PONDING OF WATER ON ALL PAVED SURFACES.
- CONTRACTOR SHALL MAINTAIN A SMOOTH GRADE TO THE PROPOSED EDGE OF PAVEMENT OR FACE OF CURB TO PROVIDE POSITIVE DRAINAGE ON ALL PAVED SURFACES. ANY AREAS WHERE WATER IS IMPOUNDED SHALL BE CORRECTED BY CONTRACTOR AT NO ADDITIONAL COST. POSITIVE DRAINAGE OF ALL ROADWAY AREAS TO THE STORM DRAIN INLETS OR OTHER ACCEPTABLE DRAINAGE CHANNELS AS NOTED ON THE PLANS IS REQUIRED.
- CONTRACTOR SHALL MAINTAIN EXISTING STREAMS, DITCHES, DRAINAGE STRUCTURES, CULVERT AND FLOWS AT ALL TIMES DURING THE WORK. CONTRACTOR SHALL PAY FOR ALL PERSONAL INJURY AND PROPERTY DAMAGE WHICH MAY OCCUR AS A RESULT OF FAILING TO MAINTAIN ADEQUATE DRAINAGE.
- ALL PIPES, DIPS AND OTHER STRUCTURES SHALL BE INSPECTED BY THE ENGINEER BEFORE BEING BACKFILLED OR BURIED. THE ENGINEER MAY REQUIRE CONTRACTOR, AT NO ADDITIONAL COST, TO UNCOVER AND RE-COVER SUCH STRUCTURES IF THE HAVE BEEN BACKFILLED OR BURIED WITHOUT SUCH INSPECTION.
- ALL STORM CHANNELS, DRAINS, AND SEWER SYSTEMS SHALL BE CLEANED UPON COMPLETION OF THE PROPOSED WORK. SEDIMENT, CHEMICALS, AND/OR DEBRIS REMOVED FROM THESE SYSTEMS SHALL BE REMOVED AND DISPOSED OF PROPERLY.

MAINTENANCE OF TRAFFIC:

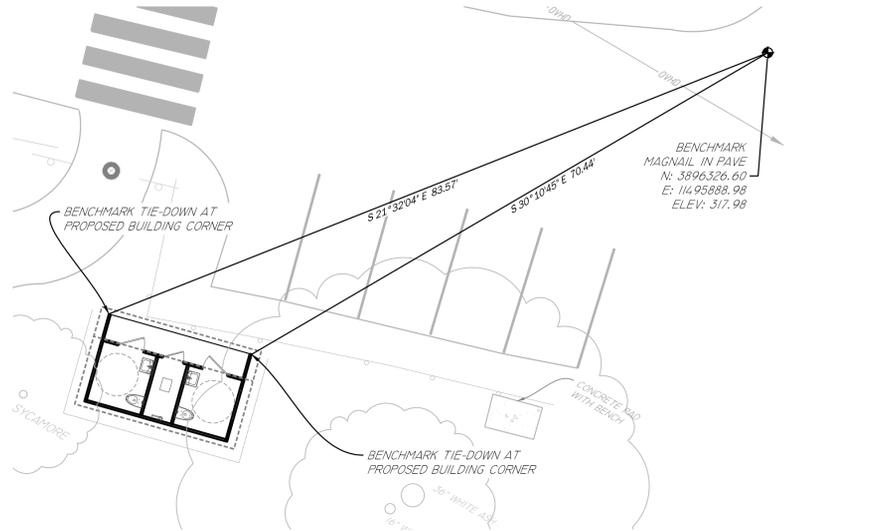
- TEMPORARY STREET CLOSURE PERMIT REQUIRED FOR CLOSURE OF SIDEWALKS, PARKING SPACES AND ROADWAYS AND IS SUBJECT TO APPROVAL BY THE CITY OF CHARLOTTESVILLE TRAFFIC ENGINEER.
- THE VIRGINIA WORK AREA PROTECTION MANUAL AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) SHALL GOVERN ALL TEMPORARY TRAFFIC CONTROL OPERATIONS THROUGHOUT CONSTRUCTION OF THIS PROJECT. ADHERENCE TO APPLICABLE PROVISIONS OF THE MANUAL IS REQUIRED OF THE CONTRACTOR EVEN THOUGH DETAILED REFERENCE TO ALL SUCH PROVISIONS MAY NOT BE CONTAINED IN THE PLANS. GENERAL NOTES
- ALL EXISTING RESIDENTIAL AND COMMERCIAL ENTRANCES SHALL BE MAINTAINED AT ALL TIMES, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- NO TEMPORARY PAVEMENT MARKING SHALL BE ALLOWED ON THE FINAL ASPHALT SURFACE COURSE.
- THE CONTRACTOR SHALL MAINTAIN ALL LANES OF TRAVEL OPEN FROM 6:30 AM TO 9:00 AM AND 3:00 PM TO 5:00 PM UNLESS DEEMED UNNECESSARY BY THE ENGINEER. SHORT PERIODS OF ONE WAY FLAGGING OPERATIONS MAY BE CONDUCTED OUTSIDE THE HOURS MENTIONED ABOVE.
- ALL TRAFFIC SIGNALS SHALL BE ADJUSTED AS DEEMED NECESSARY BY THE ENGINEER PRIOR TO ANY TRAFFIC CHANGES.
- WHEN WORK IN THE EXCAVATION AREA IS DISCONTINUED FOR A SHORT PERIOD OF TIME, AS AT NIGHT, THE CONTRACTOR SHALL BACKFILL THE CUT AREAS ADJACENT TO THE BUSTING PAVEMENT WITH A FILLET OF MATERIAL. THE FILLET SHALL BE COMPOSED OF THE SAME MATERIAL (EXCAVATION, BORROW, BASE COURSE, ETC.) ALL COSTS FOR PLACING AND REMOVING THIS FILLET OF MATERIAL SHALL BE INCLUDED IN THE PRICE BID FOR OTHER BID ITEMS OF WORK ON THIS PROJECT, AND NO ADDITIONAL CHARGE WILL BE ALLOWED.
- EXISTING SURFACE, AGGREGATE BASE AND SUBBASE MATERIAL WHICH WILL BE DEMOLISHED OR OBLITERATED DURING CONSTRUCTION AND WHICH IS SUITABLE FOR MAINTENANCE OF TRAFFIC AS DETERMINED BY THE ENGINEER, SHALL BE SALVAGED AND UTILIZED FOR MAINTENANCE OF TRAFFIC PRIOR TO THE USE OF COMMERCIAL MATERIAL. WHEN NOT SPECIFIED AS A SEPARATE PAY ITEM, THE REMOVAL AND SALVAGING OF EXISTING SURFACES AND AGGREGATE BASE AND SUBBASE MATERIAL WILL BE MEASURED AND PAID FOR AS REGULAR EXCAVATION IN ACCORDANCE WITH SECTION 303 OF THE VDOT ROAD AND BRIDGE SPECIFICATIONS.
- CONSTRUCT ALL INTERSECTIONS AND DRIVEWAYS UNDER TRAFFIC.
- IF USED, TEMPORARY TRAFFIC BARRIER SERVICE SHALL BE INSTALLED AND REMOVED SO AS NOT TO PRESENT ANY BLUNT END OR HAZARD TO THE MOTORING PUBLIC.
- CONTRACTOR SHALL NOTIFY TRANSIT PROVIDERS A MINIMUM OF TWO WEEKS PRIOR TO ANY IMPACT OR DISRUPTION TO REGULAR SERVICE OR STOPS.
- ALL EXISTING PAVEMENT MARKINGS CONFLICTING WITH PROPOSED CONSTRUCTION PAVEMENT MARKINGS (IF USED) SHALL BE ERADICATED.
- INSTALLATION AND REMOVAL OF TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE SECTION 6G.25 OF THE WORK AREA PROTECTION MANUAL.
- USE APPROPRIATE SIGNS TO SHIFT PEDESTRIAN TRAFFIC AS NEEDED.
- CONTRACTOR SHALL ASSURE ENDS OF TEMPORARY CONCRETE BARRIER (IF USED) DO NOT OBSTRUCT INTERSECTION SIGHT LINES.

FIRE PREVENTION:

- SMOKING SHALL ONLY BE ALLOWED IN DESIGNATED SPACES WITH PROPER RECEPTACLES. "NO SMOKING" SIGNS SHALL BE POSTED AT EACH BUILDING SITE AND WITHIN EACH BUILDING DURING CONSTRUCTION PER VIRGINIA STATEWIDE FIRE PREVENTION CODE.
- OVERHEAD WIRING OR OTHER OVERHEAD OBSTRUCTIONS SHALL NOT BE LOWER THAN 13 FEET 6 INCHES OVER A PUBLIC STREET PER THE VIRGINIA STATEWIDE FIRE PREVENTION CODE.
- CONTRACTOR SHALL ENSURE THAT BUILDING STREET NUMBERS ARE PLAINLY VISIBLE FROM THE FRONTAGE STREET AT ALL TIMES DURING CONSTRUCTION FOR EMERGENCY RESPONDERS, PER VIRGINIA STATEWIDE FIRE PREVENTION CODE.
- AN APPROVED WATER SUPPLY FOR FIRE PROTECTION SHALL BE MADE AVAILABLE AS SOON AS COMBUSTIBLE MATERIALS ARRIVE ON SITE. WASTE AND COMBUSTIBLE DEBRIS SHALL BE REMOVED FROM THE BUILDING AT THE END OF EACH DAY AND DISPOSED OF IN ACCORDANCE WITH VIRGINIA STATEWIDE FIRE PREVENTION CODE.
- OPERATIONS INVOLVING THE USE OF CUTTING AND WELDING SHALL BE DONE IN ACCORDANCE WITH CHAPTER 35 OF THE VIRGINIA STATEWIDE FIRE PREVENTION CODE.
- FIRE EXTINGUISHERS SHALL BE PROVIDED WITH NOT LESS THAN ONE APPROVED PORTABLE FIRE EXTINGUISHER AT EACH STAIRWAY ON ALL FLOOR LEVELS WHERE COMBUSTIBLE MATERIALS HAVE ACCUMULATED IN ACCORDANCE WITH THE VIRGINIA STATEWIDE FIRE PREVENTION CODE.
- VEHICULAR ACCESS FOR FIRE FIGHTING SHALL BE PROVIDED AT ALL CONSTRUCTION AND DEMOLITION SITES AND TO WITHIN 100 FEET OF TEMPORARY OR PERMANENT FIRE DEPARTMENT CONNECTIONS. VEHICULAR ACCESS SHALL BE CAPABLE OF SUPPORTING FIRE APPARATUS AND VEHICLE LOADING UNDER ALL WEATHER CONDITIONS IN ACCORDANCE WITH THE VIRGINIA STATEWIDE FIRE PREVENTION CODE.

CONCRETE AND ASPHALT:

- ALL MATERIAL INSIDE FORMS SHALL BE CLEAN AND FREE OF ALL ROCKS AND OTHER LOOSE DEBRIS. SUB-BASE MATERIAL SHALL BE COMPACTED BY MECHANICAL MEANS.
- CONCRETE SHALL NOT BE PLACED UNLESS THE AIR TEMPERATURE IS AT LEAST 40 DEGREES FAHRENHEIT (F) IN THE SHADE AND RISING.
- CONCRETE SHALL NOT BE PLACED UNTIL STEEL DOWELS HAVE BEEN INSTALLED IN EXISTING CONCRETE IN ACCORDANCE WITH CITY OF CHARLOTTESVILLE STANDARDS.
- 1/2" PREMOLDED EXPANSION JOINT MATERIAL SHALL BE PLACED AT A MAXIMUM OF 30' INTERVALS ON NEW SIDEWALK, CURB, CURB & GUTTER, AT EACH END OF DRIVEWAY ENTRANCES, AT EACH END OF HANDICAP RAMPS, SOME POINT ON ENTRANCE WALKS AND STEPS ADJUSTMENTS, AND ALONG BUILDINGS AND WALLS WHERE NEW CONCRETE SIDEWALKS ARE PLACED AGAINST THEM.
- ALL EXISTING CURBS, CURB & GUTTER, SIDEWALK AND STEPS TO BE REMOVED SHALL BE TAKEN OUT TO THE NEAREST JOINT. DEMOLITION AND DISPOSAL COST TO BE INCLUDED IN OTHER UNIT BID ITEMS. NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK.
- EXISTING ASPHALT CONCRETE PAVEMENT SHALL BE SAW CUT AND REMOVED AS PER THE SPECIFICATIONS. REMOVAL SHALL BE DONE IN SUCH A MANNER AS TO NOT TEAR, BULGE OR DISPLACE ADJACENT PAVEMENT. EDGES SHALL BE CLEAN AND VERTICAL, ALL CUTS SHALL BE PARALLEL OR PERPENDICULAR TO THE DIRECTION OF TRAFFIC.
- DISPOSAL OF ALL EXCESS AND DEMOLITION MATERIAL IS THE RESPONSIBILITY OF THE CONTRACTOR.



GENERAL SURVEY NOTES:

TOPOGRAPHY SOURCE: ACTUAL GROUND SURVEY (SEE ATTACHED SURVEY)
BASIS OF DATUM: HORIZONTAL: NAD-83 VIRGINIA SOUTH ZONE (GPS DERIVED)
VERTICAL: NAVD-88 (GPS DERIVED)
BENCHMARKS: (SEE IMAGES ABOVE)

SUGGESTED CONSTRUCTION SEQUENCING:

- PROTECT ADJACENT AREAS FROM DAMAGE DUE TO CONSTRUCTION ACTIVITIES.
- INSTALL PERIMETER CONTROL MEASURES AS INDICATED ON PLANS INCLUDING SAFETY FENCE, SILT FENCE, AND TREE PROTECTION.
- CLEAR AND GRUB EXISTING GROUND COVER AND DEMOLISH EXISTING ITEMS MARKED FOR DEMOLITION.
- GRADE SITE TO FINAL GRADES PER PLANS.
- FORM AND INSTALL CONCRETE WORK.
- STABILIZE ALL AREAS AND REPAIR ANY EROSION AND REMOVE ANY SEDIMENT.
- INSTALL REMAINING SITE FEATURES.
- DRESS AND OVERSEED ALL DISTURBED AREAS AS NECESSARY TO AFFECT PERMANENT VEGETATIVE COVER.
- REMOVE PERIMETER CONTROL MEASURES.

LINE + GRADE
CIVIL ENGINEERING

RIVERVIEW RESTROOMS
SITE PLAN AMENDMENT
CHARLOTTESVILLE, VIRGINIA
GENERAL NOTES



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THE WORK OF LINE + GRADE

CO.1

PROPOSED	LEGEND	EXISTING
	SANITARY CENTERLINE	
	WATER CENTERLINE	
	STORM SEWER	
	GAS LINE	
	UNDERGROUND POWER	
	UNDERGROUND COMMUNICATIONS	
	OVERHEAD UTILITY	
	CONTOUR LINE	
	CURB/CURB AND GUTTER	
	SPILL CURB WITH TRANSITION AREA	
	PAVEMENT MARKING LINE	
	BUILDING LINE	
	BUILDING OVERHEAD/PROJECTION	
	WALL	
	TREELINE	
	PROPERTY LINE	
	EASEMENT LINE	
	BUILDING SETBACK LINE	
	ROAD CENTERLINE	
	CHANNEL CENTERLINE	
	BERM CENTERLINE	
	LIMITS OF DISTURBANCE	
	DRAINAGE DIVIDE	
	UTILITY POLE	
	ADA ACCESS PATH AND LANDING	
	DETECTABLE WARNING STRIP	
	SIGN	
	PARKING/HANDICAP PARKING COUNTER	
	ENTRYWAY/INGRESS/EGRESS SYMBOL	
	TREE	
	SHRUB	
	CONCRETE	
	BMP	
	RIPRAP	

ABBREVIATIONS

AC	ACRES	LP	LOW POINT
ADJ	ADJUST	LVC	LENGTH OF VERTICAL CURVE
APPROX	APPROXIMATE	MAX	MAXIMUM
BC	BACK OF CURB	MIN	MINIMUM
BLDG	BUILDING	ME	MATCH EXISTING
BM	BENCHMARK	NIC	NOT IN CONTRACT
BVCS	BEGIN VERTICAL CURVE STATION	N.T.S.	NOT TO SCALE
BVCE	BEGIN VERTICAL CURVE ELEVATION	OC	ON CENTER
BW	BOTTOM OF WALL	OD	OUTSIDE DIAMETER
CL	CENTERLINE	O/S	OFFSET
CF	CUBIC FEET	PC	POINT OF CURVATURE
CG	CURB AND GUTTER	PCC	POINT OF COMPOUND CURVATURE
CONC	CONCRETE	PI	POINT OF INTERSECTION
D OR Δ	DELTA ANGLE	PRC	POINT OF REVERSE CURVATURE
DIA	DIAMETER	PROP	PROPOSED
EC	EDGE OF CONCRETE	PT	POINT OF TANGENCY
EG	EXISTING GRADE	PVC	POINT OF VERTICAL CURVATURE
EL/ELEV	ELEVATION	PVI	POINT OF VERTICAL INTERSECTION
EP	EDGE OF PAVEMENT	PVT	POINT OF VERTICAL TANGENCY
EVCS	END VERTICAL CURVE STATION	R	RADIUS
EVCE	END VERTICAL CURVE ELEVATION	ROW	RIGHT-OF-WAY
EX	EXISTING	SAN	SANITARY SEWER
FG	FINISHED GRADE	SD	STORM DRAIN
FND	FOUNDATION	SF	SQUARE FEET
GRVL	GRAVEL	SMH	SANITARY MANHOLE
HC	HANDICAP	STA	STATION
HP	HIGH POINT	SW	SIDEWALK
ID	INSIDE DIAMETER	TC	TOP OF CURB
INV	INVERT	TEMP	TEMPORARY
LAT	LATERAL	TH	THROAT
LF	LINEAR FEET	TW	TOP OF WALL
LOD	LIMITS OF DISTURBANCE	TYP	TYPICAL
		WSEL	WATER SURFACE ELEVATION

SEWER FLOW (AVERAGE DAILY DEMAND)

USE	DESIGN UNIT ¹	QUANTITY ²	FLOW PER USE (GPD)
CITY PARK	2 GPCD	582	1164
TOTAL AVERAGE DAILY FLOW (GPD)			1164
AVERAGE HOUR (GPH) ³			83
PEAK HOUR (AVE HOUR x 4, GPH)			333

¹ A DESIGN UNIT OF 2 GAL/CAPITA-DAY WAS CALCULATED USING THE AVERAGE FLUSH VALUE OF THE FIXTURES (1.33 GAL PER FLUSH), PLUS 0.5 GAL PER PERSON FOR HAND WASHING, ROUNDED UP.
² THIS ESTIMATION OF PARK ATTENDANCE IS BASED ON A PARK ATTENDANCE SURVEY PERFORMED IN 2016 DURING PEAK SEASON AND ADJUSTED FOR FUTURE GROWTH. THIS QUANTITY YIELDS A CONSERVATIVE FLOW ESTIMATION, SINCE IT ASSUMES THAT EVERY ATTENDEE USES THE RESTROOM.
³ AVERAGE HOUR = TOTAL AVERAGE DAILY FLOW/HOURS THE PARK IS OPEN (14).

1 SEWER DEMAND

WATER DEMAND CALCULATIONS:

FIXTURE	FIXTURE VALUE @ 60 PSI ¹	NO. OF FIXTURES	FIXTURE TOTALS
BATHTUB	8		0
BEDPAN WASHERS	10		0
BIDET	2		0
DENTAL UNIT	2		0
DRINKING FOUNTAIN - PUBLIC	2	1	2
KITCHEN SINK	2.2		0
LAVATORY	1.5	2	3
SHOWERHEAD (SHOWER ONLY)	2.5		0
SERVICE SINK	4		0
TOILET - FLUSH VALVE	35	2	70
- TANK TYPE	4		0
URINAL - PEDESTAL FLUSH VALVE	35		0
- WALL FLUSH VALVE	16		0
WASH SINK (EACH SET OF FAUCETS)	4		0
DISHWASHER	2		0
WASHING MACHINE	6		0
HOSE (50 FT WASH DOWN) - 1/2 in.	5		0
- 5/8 in.	9	1	9
- 3/4 in.	12		0
COMBINED FIXTURE VALUE TOTAL =			84

¹ VALUES FROM AWWA M-22 WORKSHEET
 ESTIMATED DEMAND = 48 GPM
 FROM AWWA FIG. 4-2 OR 4-3
 ASSUMED PRESSURE = 130 PSI
 PRESSURE ADJUSTMENT FACTOR = 1.34
 FROM AWWA TABLE 4-1
 CUSTOMER PEAK DEMAND x PRESSURE ADJUSTMENT FACTOR, GPM = 64.32

IRRIGATION
 TOTAL IRRIGATION AREA = 0 SF
 NUMBER OF IRRIGATION SECTIONS = 0
 (100 FT SECTIONS)
 IRRIGATION SYSTEM TYPE =
 IRRIGATION FACTOR = 0
 IRRIGATION DEMAND (NO. OF SECTIONS x IRRIGATION FACTOR) GPM = 0

HOSE BIBS	QUANTITY	DEMAND
1/2" BIB		0
5/8" BIB		0
3/4" BIB		0

TOTAL IRRIGATION DEMAND (IRRIGATION + HOSE BIBS) GPM = 0

FIXED DEMAND
 ADDITIONAL FIXED LOAD, GPM = 0

TOTAL WATER DEMAND ESTIMATE
 SUM OF FIXTURES, IRRIGATION, AND FIXED DEMAND, GPM = 64.32
 METER REQUIRED = 1 1/2" POSITIVE DISPLACEMENT

NOTE: AT THE DIRECTION OF THE CITY OF CHARLOTTESVILLE UTILITIES DEPARTMENT, A 1" METER WILL BE PROVIDED TO SERVICE THIS FACILITY.

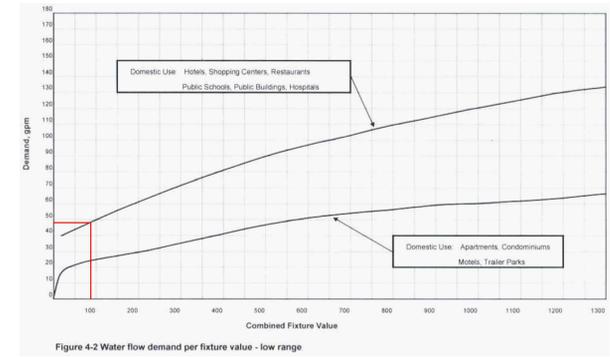


Figure 4-2 Water flow demand per fixture value - low range

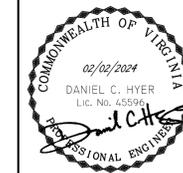
2 WATER DEMAND AND METER SIZING



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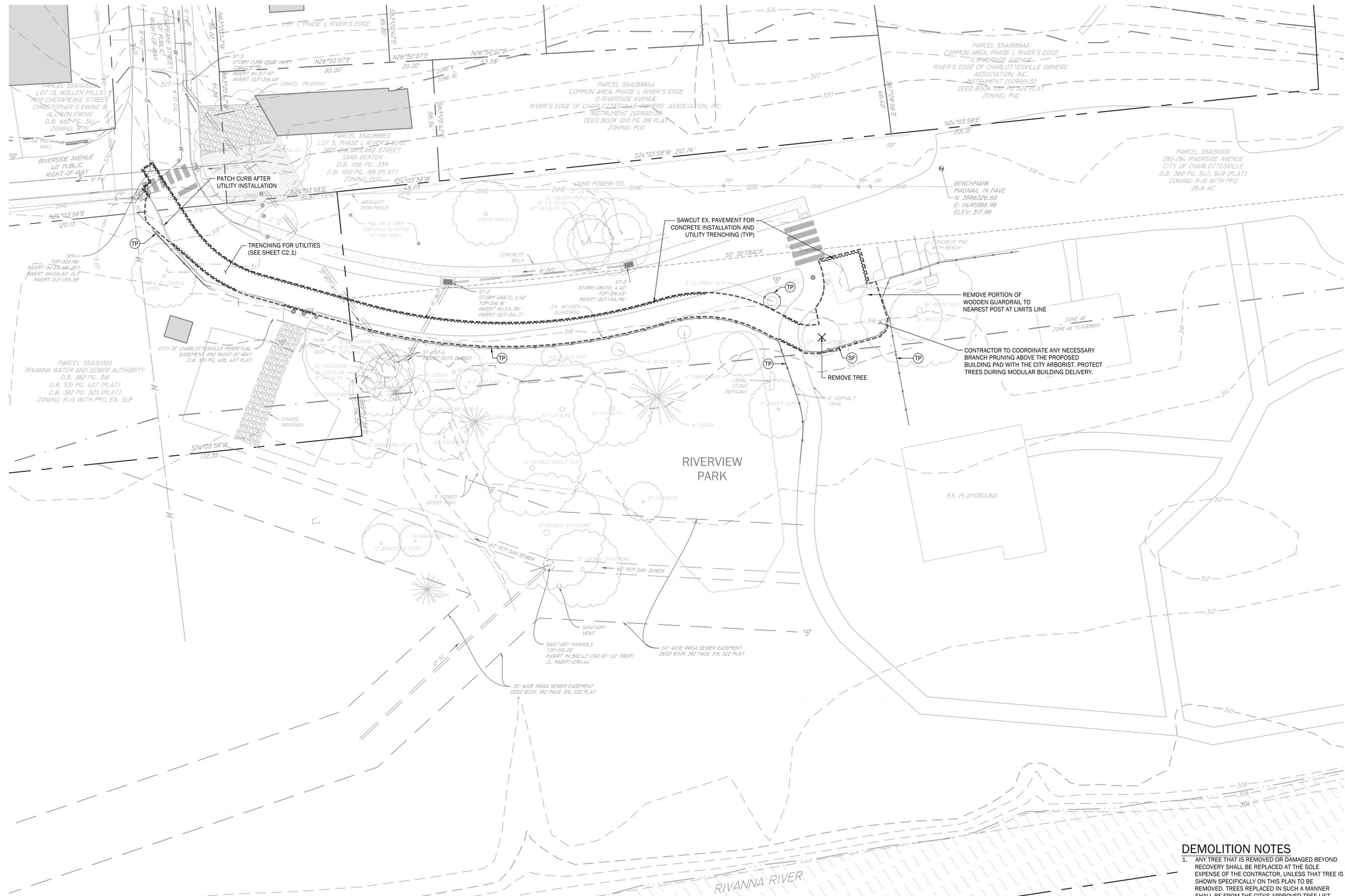
THE WORK OF
 LINE + GRADE

C0.2



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PROJECT	2001002
THE WORK OF	LINE + GRADE

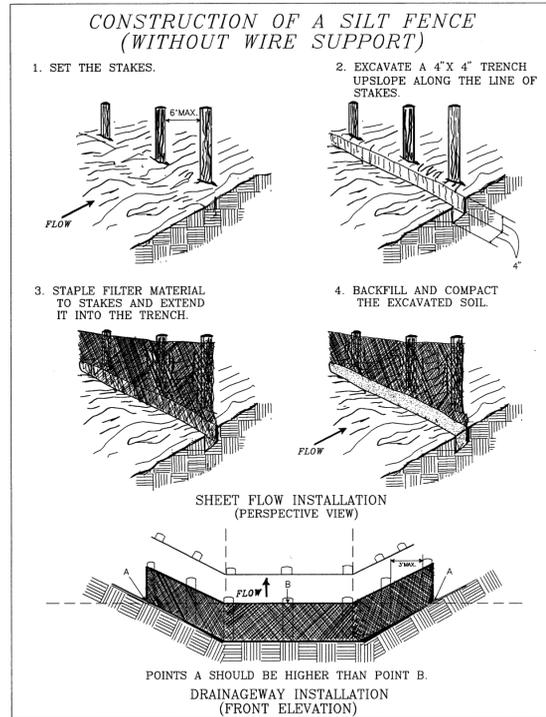
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DEMOLITION NOTES

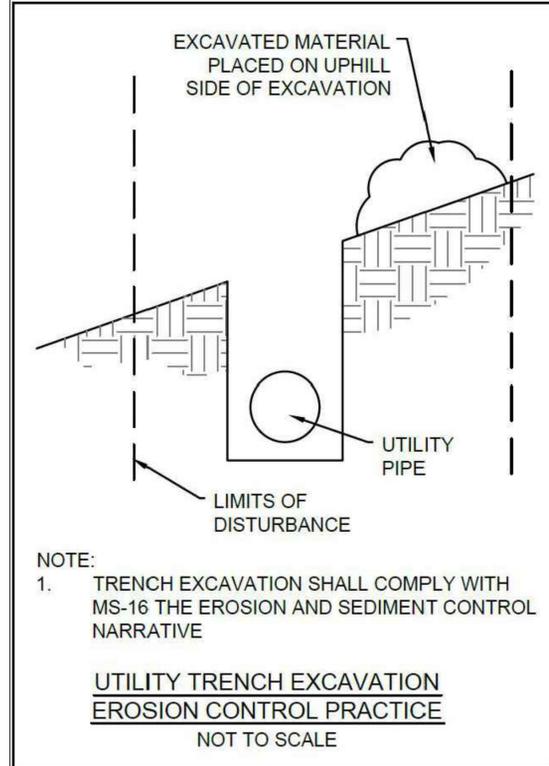
- ANY TREE THAT IS REMOVED OR DAMAGED BEYOND RECOVERY SHALL BE REPLACED AT THE SOLE EXPENSE OF THE CONTRACTOR, UNLESS THAT TREE IS SHOWN SPECIFICALLY ON THIS PLAN TO BE REMOVED. TREES REPLACED IN SUCH A MANNER SHALL BE FROM THE CITY'S APPROVED TREE LIST, AND SUBJECT TO APPROVAL BY THE CITY ARBORIST.

1 DEMOLITION PLAN
1" = 20' 0" 20 40



Source: Adapted from Installation of Straw and Fabric Filter Barriers for Sediment Control, Sherwood and Wyant Plate 3.05-2

1 3.05-2 SILT FENCE

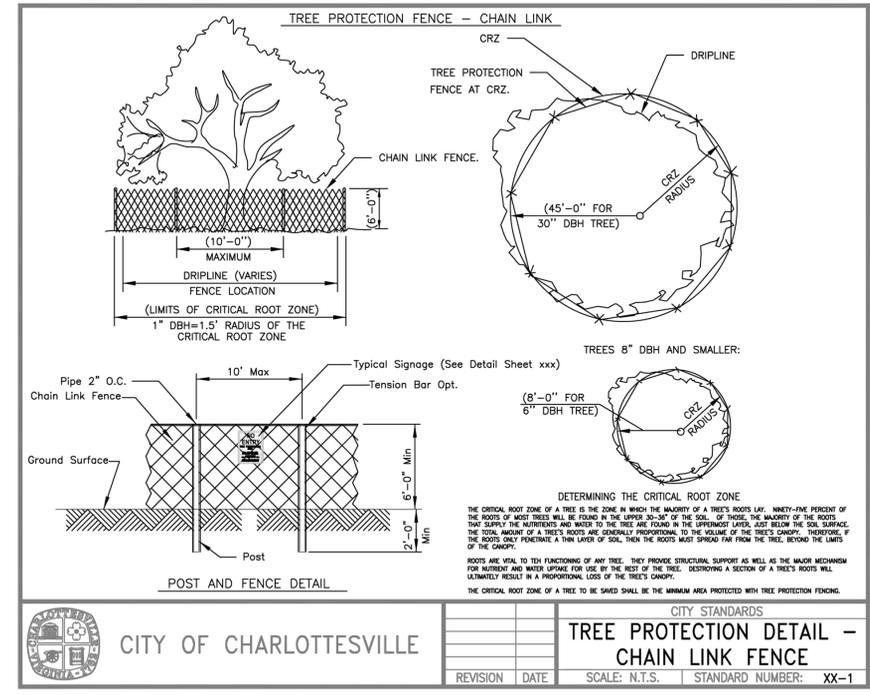


NOTE:
1. TRENCH EXCAVATION SHALL COMPLY WITH MS-16 THE EROSION AND SEDIMENT CONTROL NARRATIVE

**UTILITY TRENCH EXCAVATION
EROSION CONTROL PRACTICE**

NOT TO SCALE

2 TRENCH EXCAVATION



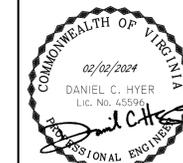
CITY OF CHARLOTTESVILLE		CITY STANDARDS	
REVISION		DATE	
SCALE: N.T.S.		STANDARD NUMBER: XX-1	

3 XX-2 TREE PROTECTION FENCE



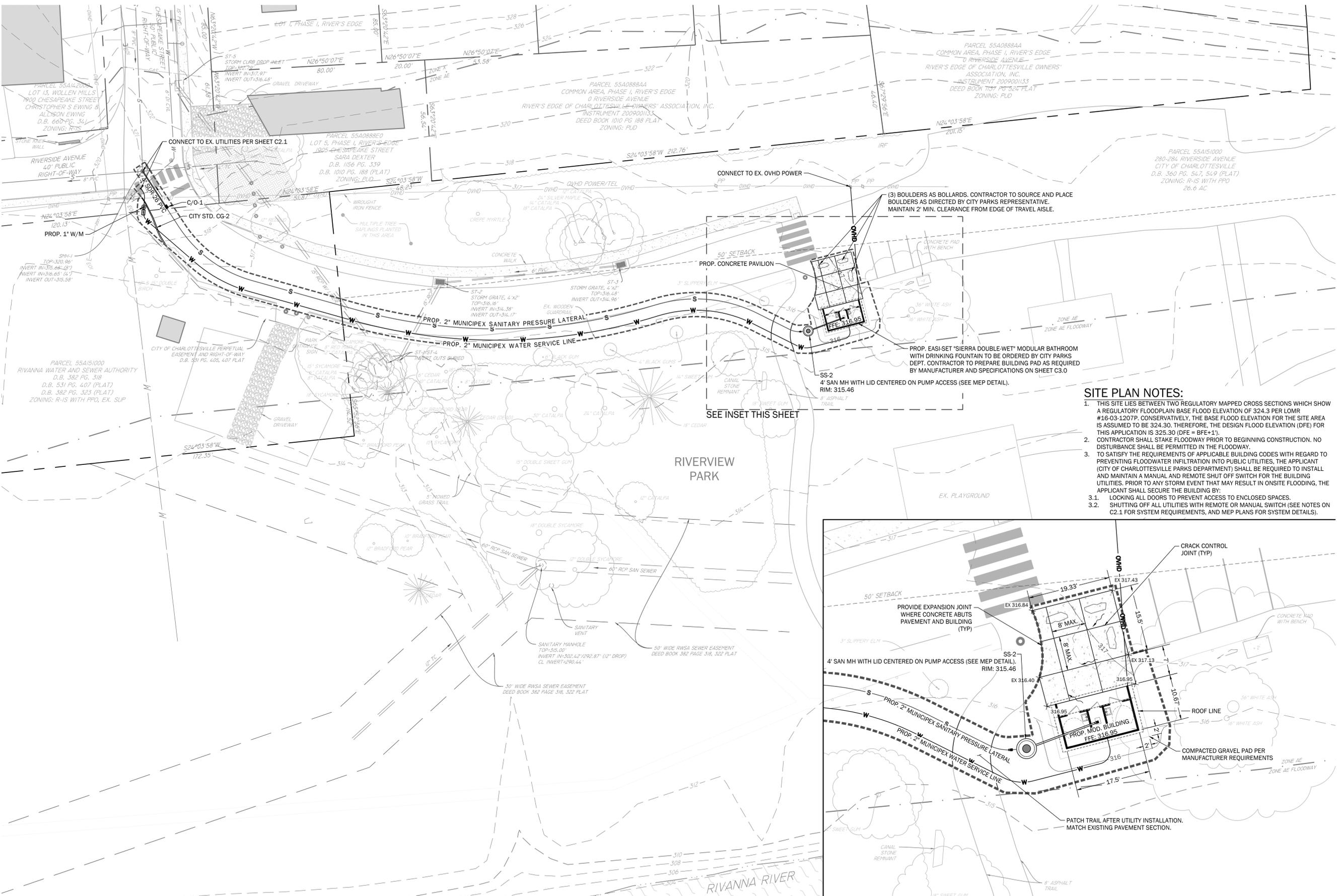
APPROVED	DCH
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PROJECT	2001002

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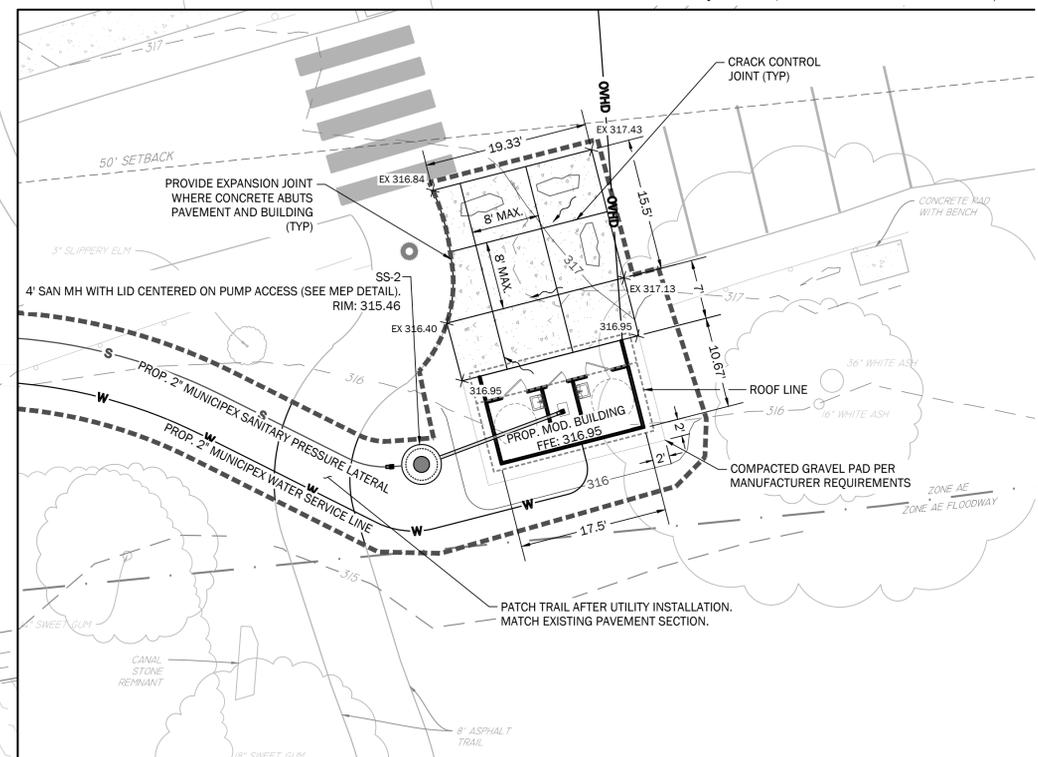


APPROVED DCH
SUBMISSION NO. 5
PROJECT 2001002
THE WORK OF LINE + GRADE

C2.0

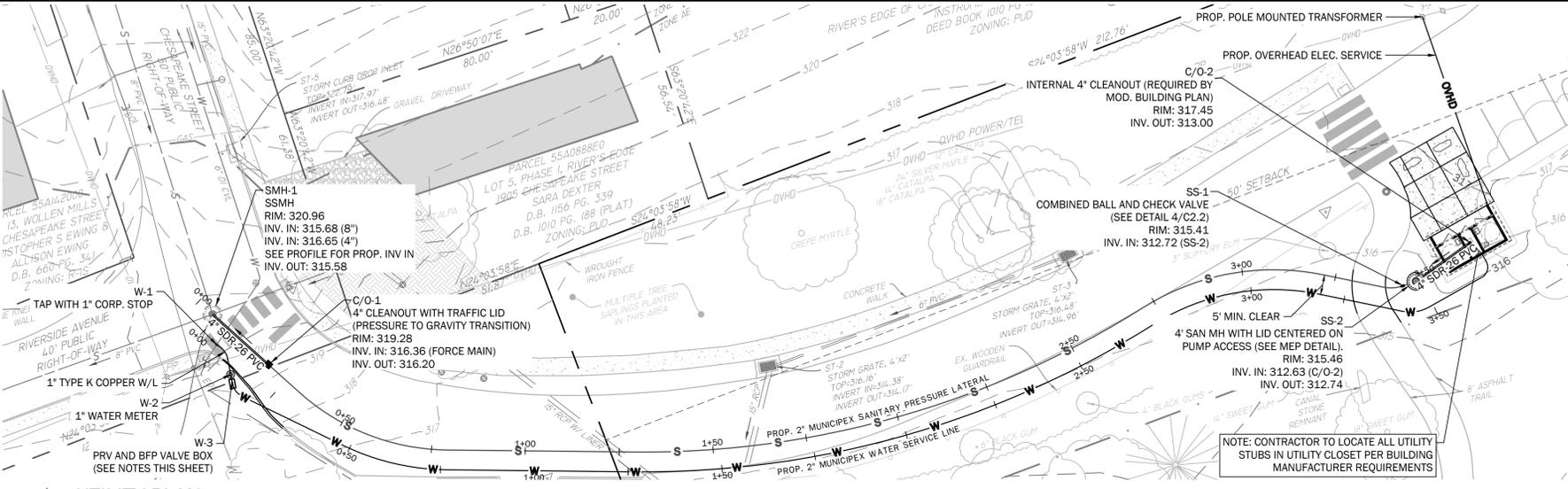


- SITE PLAN NOTES:**
- THIS SITE LIES BETWEEN TWO REGULATORY MAPPED CROSS SECTIONS WHICH SHOW A REGULATORY FLOODPLAIN BASE FLOOD ELEVATION OF 324.3 PER LOMR #16-03-1207P. CONSERVATIVELY, THE BASE FLOOD ELEVATION FOR THE SITE AREA IS ASSUMED TO BE 324.30. THEREFORE, THE DESIGN FLOOD ELEVATION (DFE) FOR THIS APPLICATION IS 325.30 (DFE = BFE+1).
 - CONTRACTOR SHALL STAKE FLOODWAY PRIOR TO BEGINNING CONSTRUCTION. NO DISTURBANCE SHALL BE PERMITTED IN THE FLOODWAY.
 - TO SATISFY THE REQUIREMENTS OF APPLICABLE BUILDING CODES WITH REGARD TO PREVENTING FLOODWATER INFILTRATION INTO PUBLIC UTILITIES, THE APPLICANT (CITY OF CHARLOTTESVILLE PARKS DEPARTMENT) SHALL BE REQUIRED TO INSTALL AND MAINTAIN A MANUAL AND REMOTE SHUT OFF SWITCH FOR THE BUILDING UTILITIES. PRIOR TO ANY STORM EVENT THAT MAY RESULT IN ONSITE FLOODING, THE APPLICANT SHALL SECURE THE BUILDING BY:
 - LOCKING ALL DOORS TO PREVENT ACCESS TO ENCLOSED SPACES.
 - SHUTTING OFF ALL UTILITIES WITH REMOTE OR MANUAL SWITCH (SEE NOTES ON C2.1 FOR SYSTEM REQUIREMENTS, AND MEP PLANS FOR SYSTEM DETAILS).



1 SITE PLAN
1" = 20': 0 20 40

2 SITE PLAN INSET
1" = 10': 0 10 20



UTILITY NOTES

- ALL UTILITIES BELOW THE DESIGN FLOOD ELEVATION (DFE) OF 325.30 SHALL CONFORM TO THE REQUIREMENTS LISTED IN ASCE 24 CHAPTER 7. SEE SHEET C3.0 FOR ELECTRICAL AND BUILDING NOTES.
1. PRESSURE REGULATING VALVE AT BACK OF WATER METER SHALL BE SET AT NO LESS THAN 60 PSI AND NO GREATER THAN 80 PSI.
2. WATER SERVICE LINE CONNECTION TO BUILDING SHALL ADHERE TO ALL BUILDING MANUFACTURER REQUIREMENTS.
3. CONTRACTOR SHALL PROVIDE A SINGLE, CONTINUOUS LENGTH OF PIPING FOR SANITARY PRESSURE LATERAL BETWEEN GRINDER PUMP AND TRANSITION TO GRAVITY LATERAL AT CLEANOUT.
4. CONTRACTOR SHALL ENSURE NO LOCALIZED HIGH POINTS OCCUR WITHIN SANITARY PRESSURE LATERAL OR WATER SERVICE LINE DURING INSTALLATION.
5. THE FOLLOWING VALVES ARE REQUIRED FOR THE PREVENTION OF INFILTRATION OF FLOODWATERS INTO THE PUBLIC UTILITIES SYSTEMS AND THE PREVENTION OF BACKWATER FLOWS FROM THE PRIVATE SEWER SYSTEM INTO FLOODWATERS IN THE EVENT OF EXTREME FLOODING (SEE MEP PLANS):
5.1 CHECK VALVE REQUIRED ON GRAVITY SEWER LATERAL BETWEEN BUILDING AND PUMP.
5.2 COMBINATION SHUTOFF AND CHECK VALVE REQUIRED AT PUMP OUTLET (SS-1).
5.3 BACKFLOW PREVENTER VALVE REQUIRED ON PRIVATE SIDE OF WATER METER ON WATER SERVICE LINE (BACKFLOW PREVENTER VALVE SHALL BE TESTED ANNUALLY).
6. CITY PARKS DEPARTMENT SHALL INSTALL A UTILITY SHUT-OFF SYSTEM WHICH WILL ALLOW AUTOMATED REMOTE SHUT-OFF OF ALL BUILDING UTILITIES. THIS SYSTEM IS DETAILED ON THE MEP PLANS. THE SYSTEM SHALL:
6.1 ALLOW FOR THE REMOTE SHUT-OFF OF ALL UTILITIES IN THE EVENT OF FLOOD WARNINGS OR IMMINENT FLOODING UTILIZING AN INTERNET SERVICE CONNECTION.
6.2 HAVE MANUAL SHUT-OFF CONTROLS AT THE BUILDING.
6.3 BE CAPABLE OF SHUTTING OFF UTILITIES AUTOMATICALLY IN THE EVENT THE BUILDING FLOODS WITH WATER AND UTILITIES HAVE NOT BEEN PREVIOUSLY DISABLED.
6.4 PREVENT UTILITIES FROM BEING TURNED BACK ON UNTIL FLOOD WATERS HAVE RECEDED BELOW THE FINISHED FLOOR ELEVATION.
6.5 BE MAINTAINED IN WORKING ORDER AND TESTED MONTHLY.

1 UTILITY PLAN

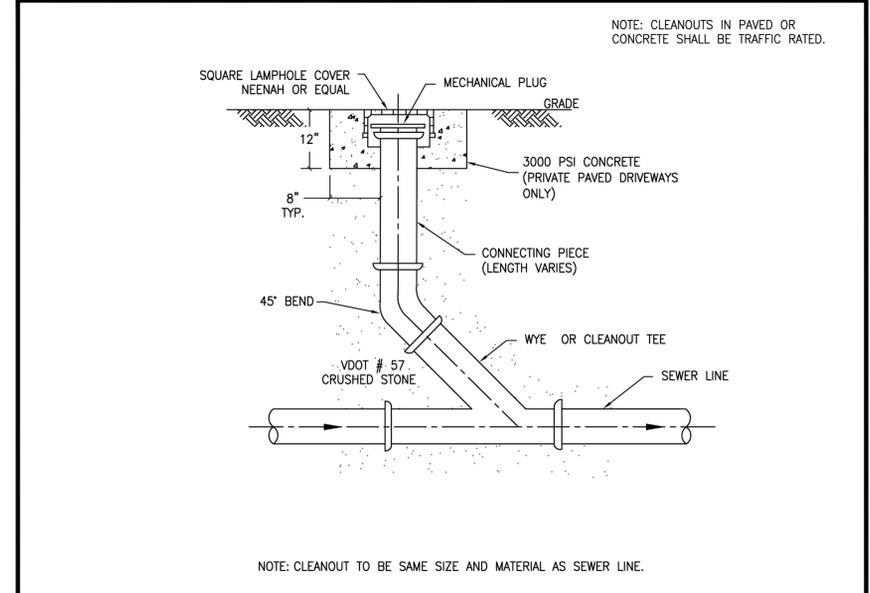
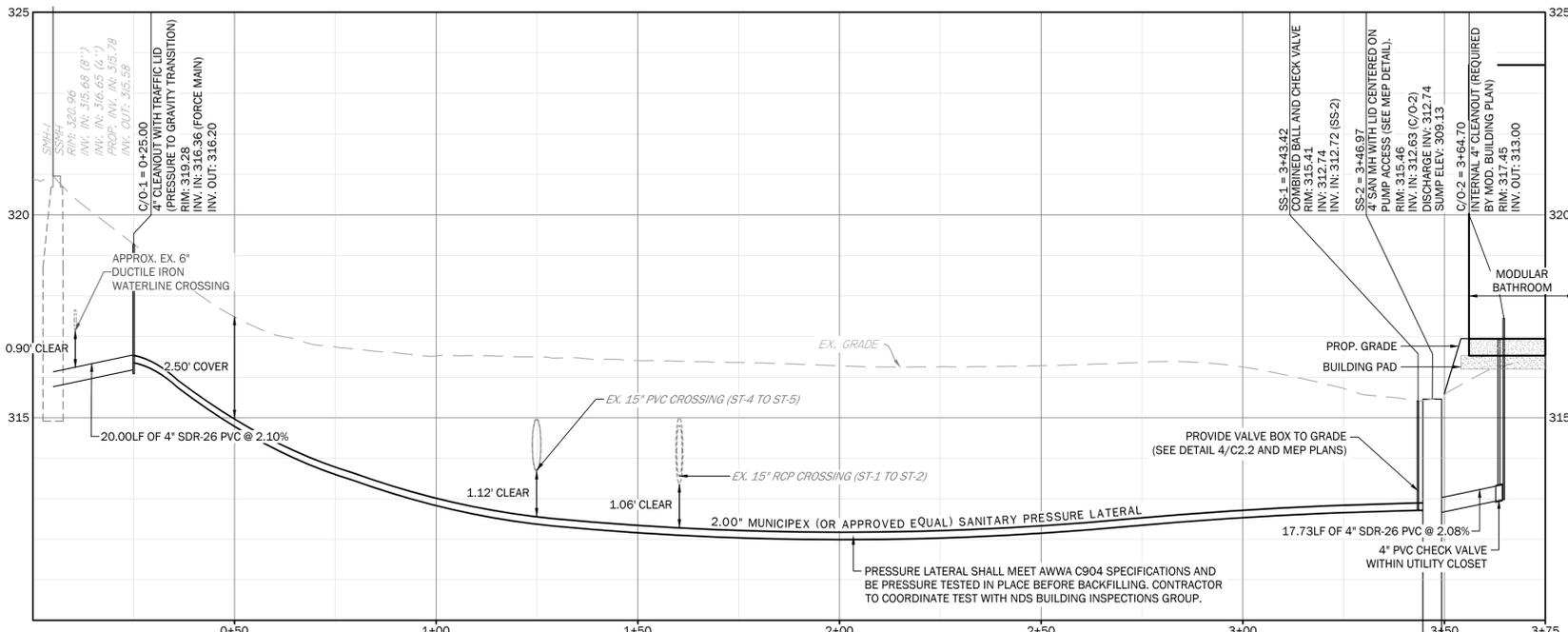


Table with columns for REVISION, DATE, and STANDARD NUMBER. Includes City of Charlottesville logo and 'CITY STANDARDS CLEANOUT DETAIL'.

4 WW 5.1 CLEANOUT



2 SANITARY LATERAL PROFILE

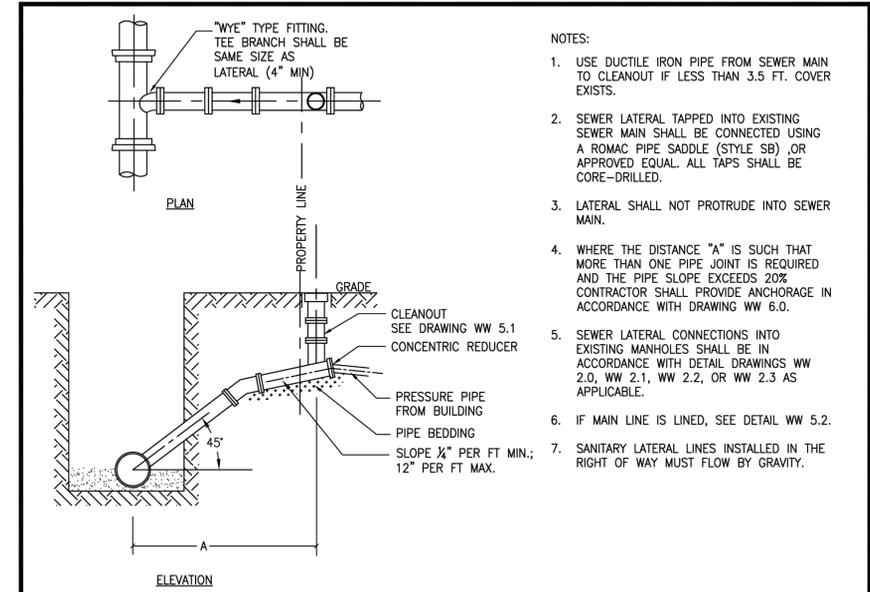
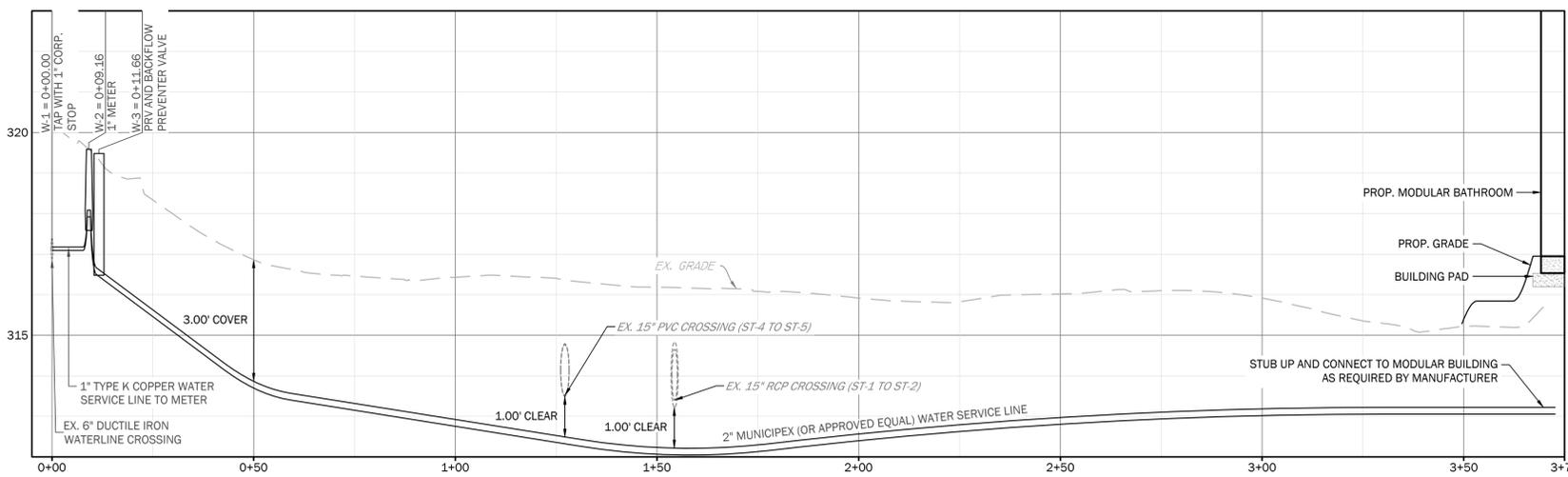
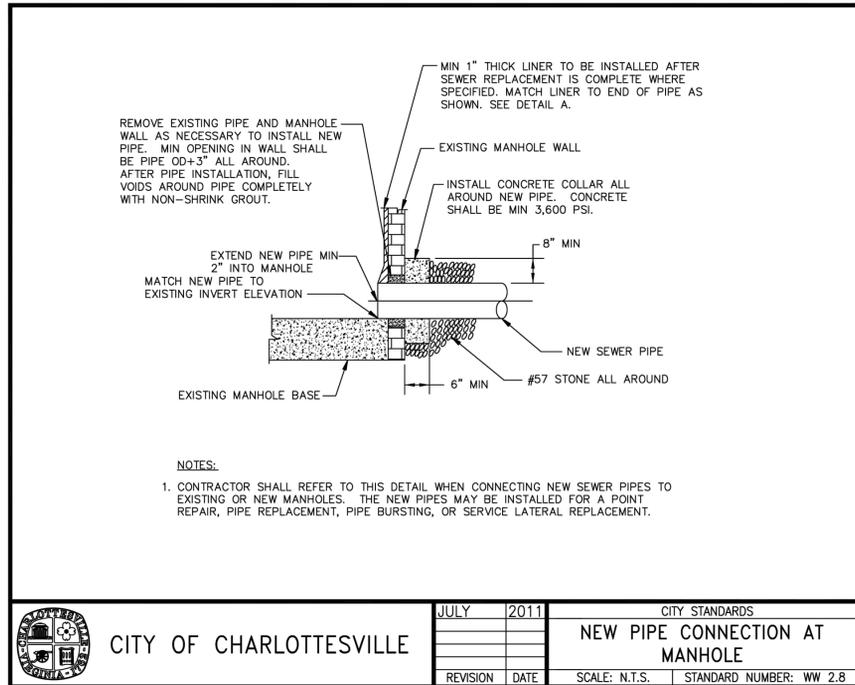


Table with columns for REVISION, DATE, and STANDARD NUMBER. Includes City of Charlottesville logo and 'CITY STANDARDS PRESSURIZED SEWER LATERAL CONNECTION'.

5 WW 5.4 PRESSURIZED SEWER LATERAL CONNECTION

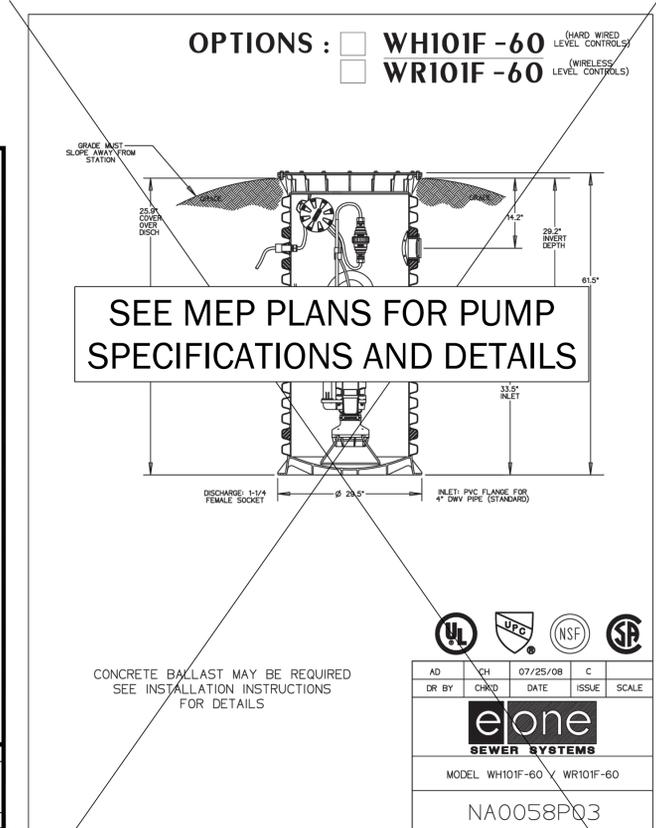


3 WATER SERVICE PROFILE

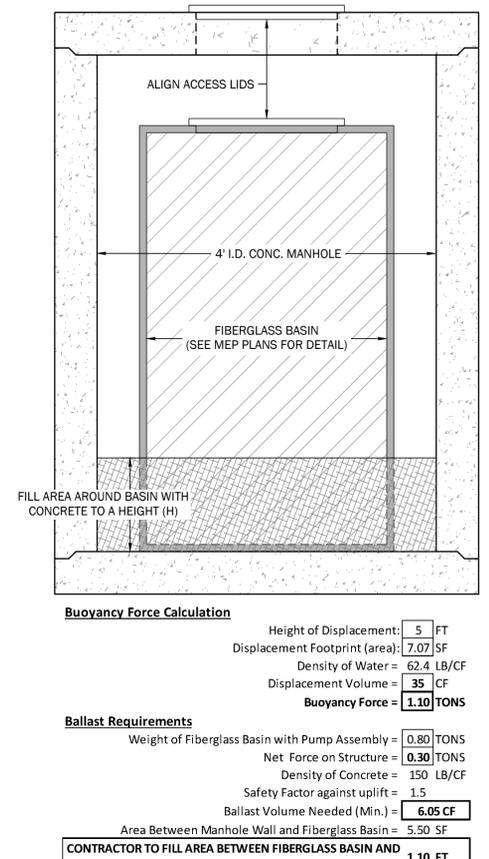


CITY OF CHARLOTTESVILLE	JULY	2011	CITY STANDARDS
	NEW PIPE CONNECTION AT MANHOLE		
REVISION	DATE	SCALE: N.T.S.	STANDARD NUMBER: WW 2.8

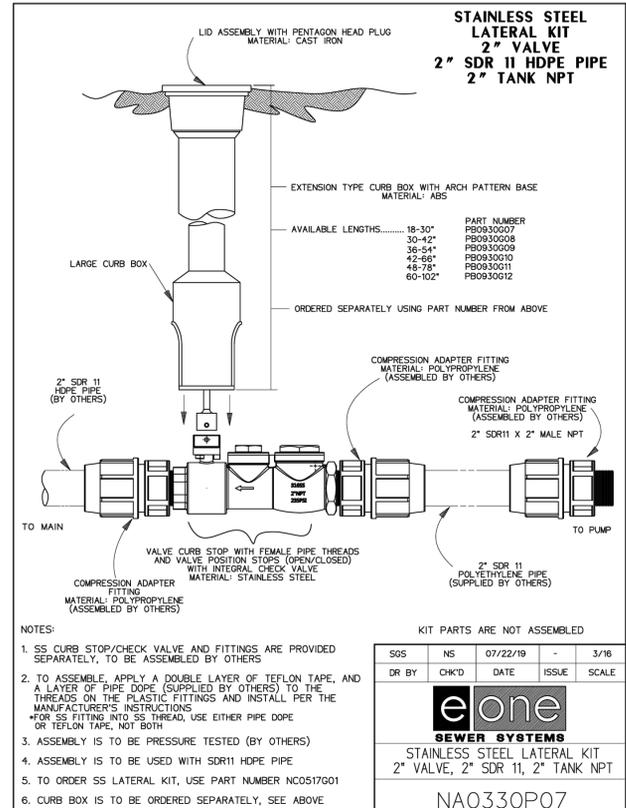
1 WW 2.8 NEW PIPE CONNECTION AT MANHOLE



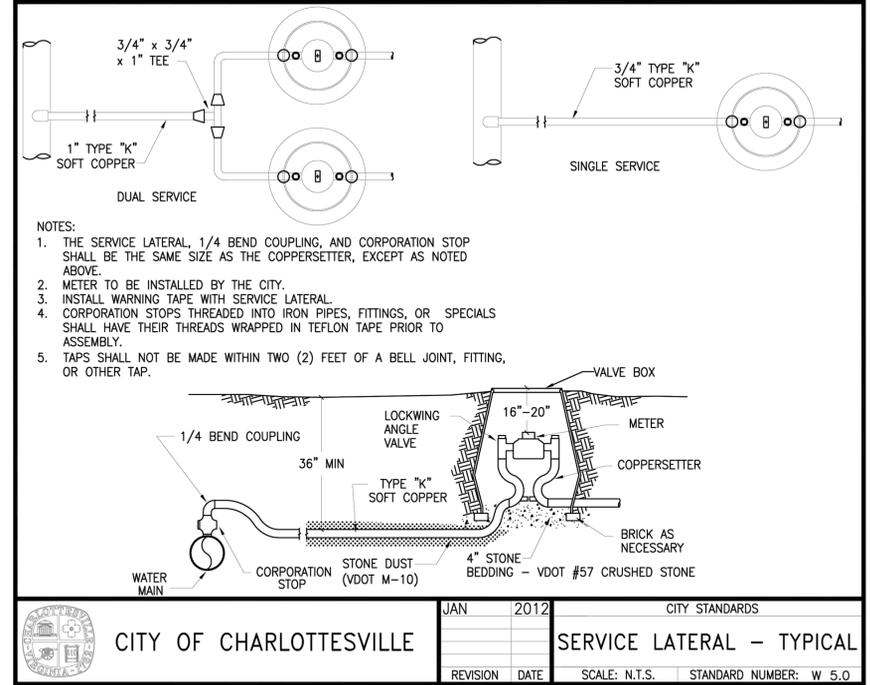
2 E/ONE WH101F-60 GRINDER PUMP



3 PUMP BALLAST CALCULATION AND DETAIL

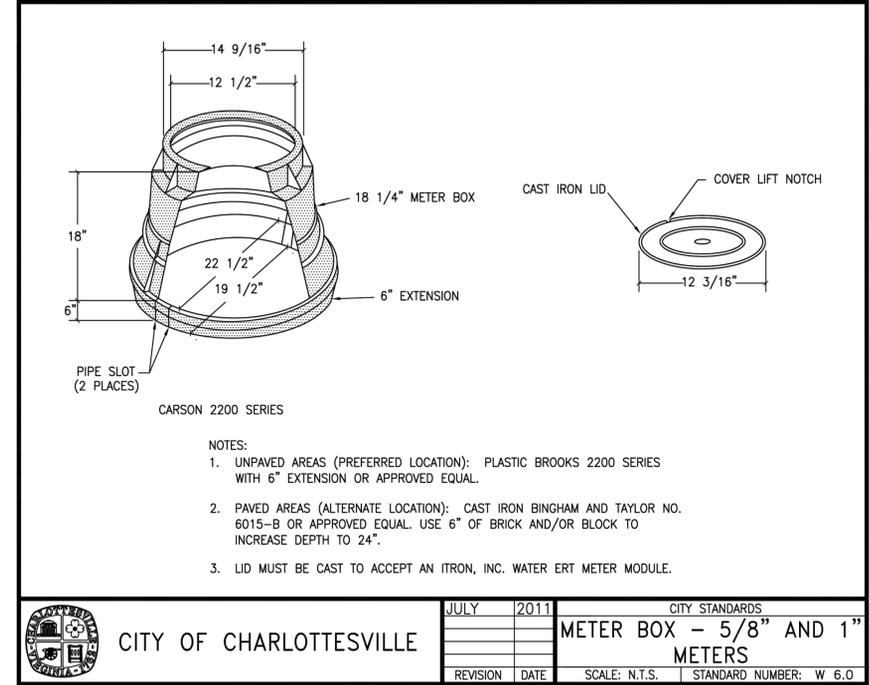


4 COMBINATION SHUTOFF AND CHECK VALVE



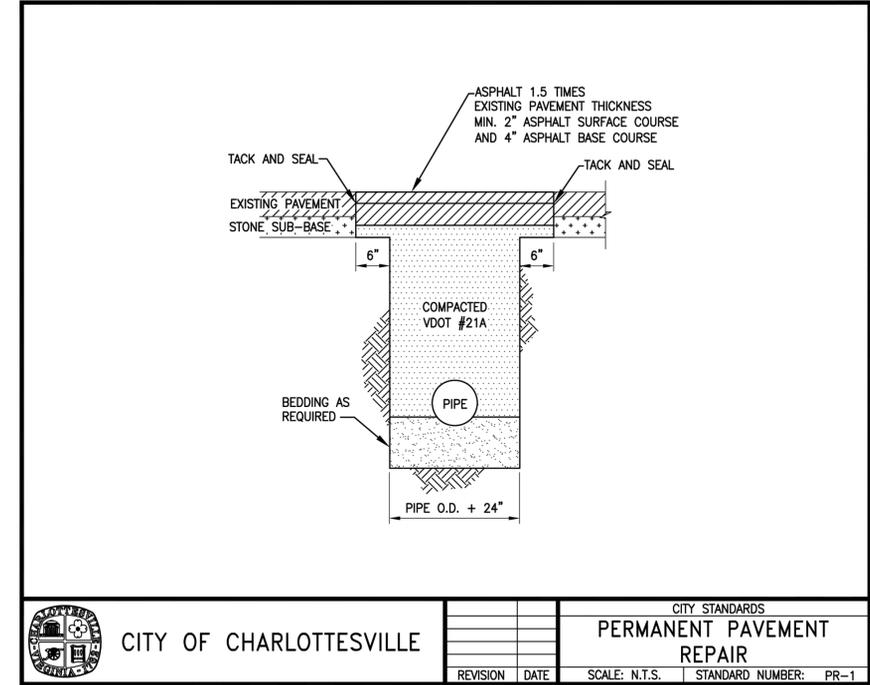
CITY OF CHARLOTTESVILLE	JAN	2012	CITY STANDARDS
	SERVICE LATERAL - TYPICAL		
REVISION	DATE	SCALE: N.T.S.	STANDARD NUMBER: W 5.0

5 W 5.0 SERVICE LATERAL



CITY OF CHARLOTTESVILLE	JULY	2011	CITY STANDARDS
	METER BOX - 5/8" AND 1" METERS		
REVISION	DATE	SCALE: N.T.S.	STANDARD NUMBER: W 6.0

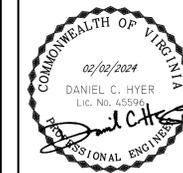
6 W 6.0 METER BOX



CITY OF CHARLOTTESVILLE	CITY STANDARDS		
	PERMANENT PAVEMENT REPAIR		
REVISION	DATE	SCALE: N.T.S.	STANDARD NUMBER: PR-1

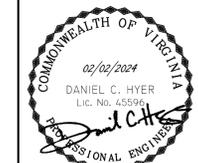
7 PR-1 PERMANENT PAVEMENT REPAIR

RIVERVIEW RESTROOMS
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CHARLOTTESVILLE, VIRGINIA



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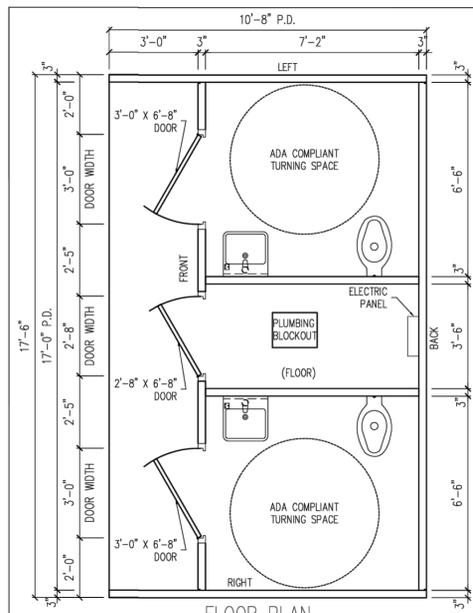
THE WORK OF LINE + GRADE



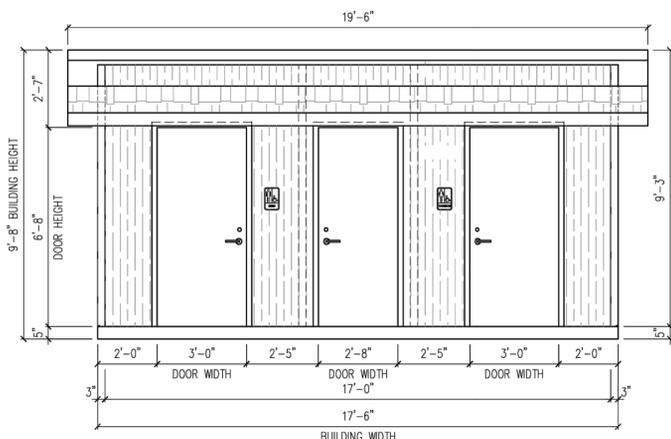
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SUBMISSION NO. 5
PROJECT 2001002

THE WORK OF
LINE + GRADE

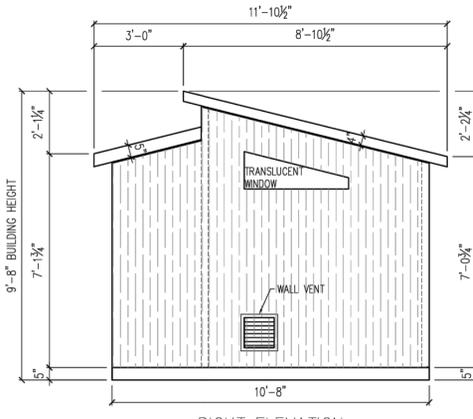
C3.0



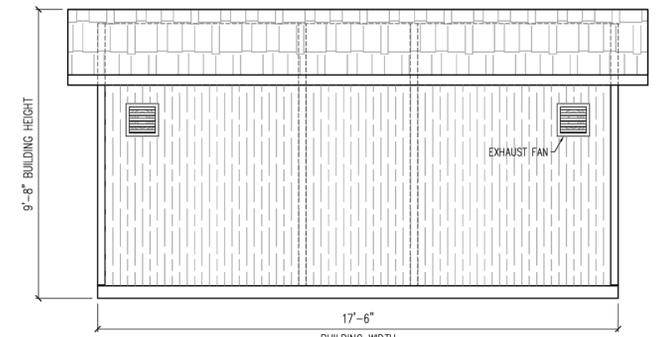
FLOOR PLAN



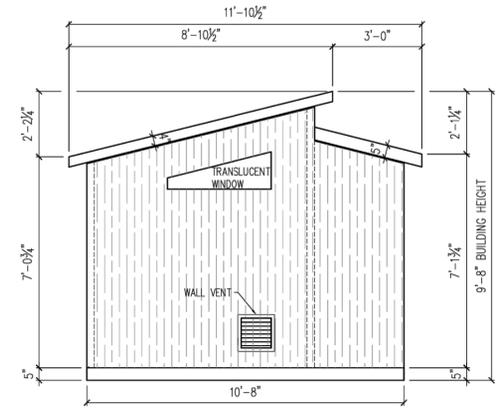
FRONT ELEVATION



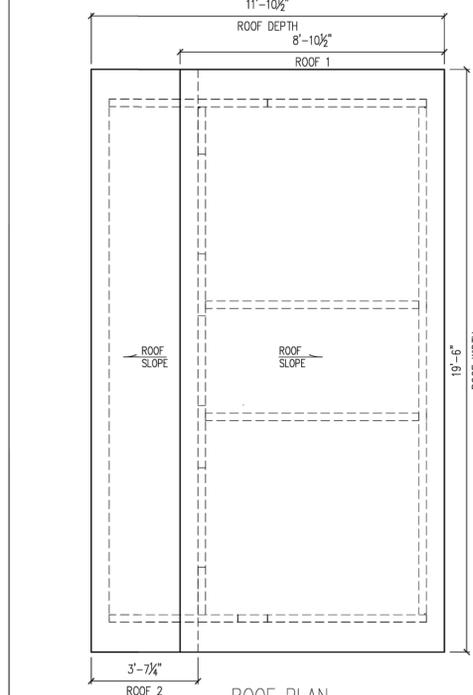
RIGHT ELEVATION



REAR ELEVATION



LEFT ELEVATION



ROOF PLAN

BUILDING LAYOUT

NOTE: FINISH OPTIONAL, VARIOUS FINISHES ARE AVAILABLE

- EASI-BRICK
- BARNBOARD
- BROOM
- OTHER: _____

- GENERAL NOTES:
- ALL REQUIRED OPENINGS FOR ELECTRIC, MECHANICAL, LOUVERS, ETC. MUST BE SIZED AND LOCATED BY BUYER ON THIS DRAWING (OPENING SIZES AND LOCATIONS MAY HAVE TO BE ALTERED IF THEY INTERFERE WITH CONNECTIONS OR REINFORCING)
 - ALL VENTS ARE FROM EXTERIOR
 - A SIGNED COPY MUST BE RETURNED BEFORE BUILDING CAN BE RELEASED FOR PRODUCTION

MESSAGE CENTER	
BUILDING FINISH	---
BUILDING STAIN	---
DOOR COLOR	---
BUILDING WEIGHT	---
CUSTOMER APPROVAL	
APPROVED BY:	DATE:

EASI-SET WORLDWIDE
5119 Callett Rd. • Midland, VA 22728 • info@EasiSet.com
WWW.EasiSet.com • 800-547-4045 • Fax 540-439-2541

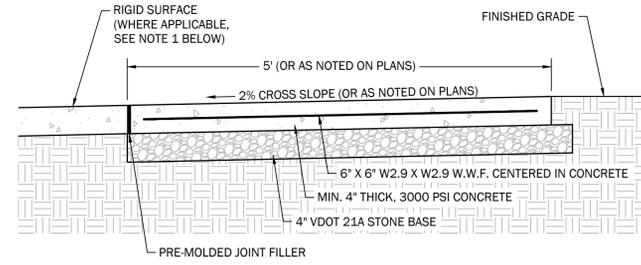
DATE	DESCRIPTION	REV	BY

PROJECT: 10'-8" x 17'-6" x 9'-8" EASI-SET SIERRA FLUSH RESTROOM BUILDING
CONTRACTOR: _____

BUILDING LAYOUT
JOB #
DRAWN BY MJR
CHECK BY KSS
ISSUE DATE 07.08.14
SHEET LAYOUT

BUILDING NOTES

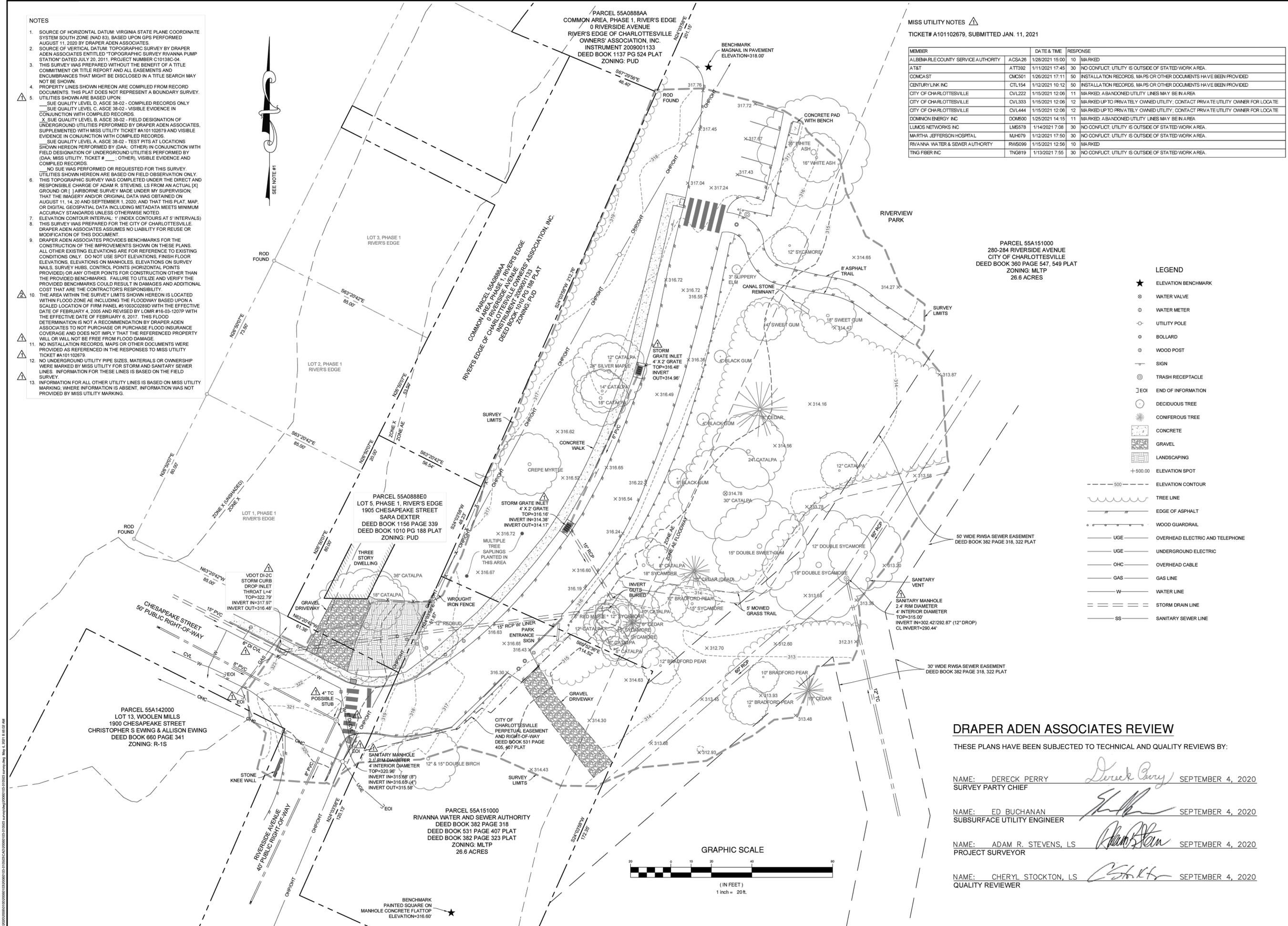
- CONTRACTOR IS RESPONSIBLE FOR OBTAINING BUILDING PERMIT.
- CONTRACTOR SHALL CONFIRM ALL BUILDING OPTIONS WITH CITY PARKS DEPARTMENT PRIOR TO PLACING ORDER.
- BUILDING SHALL BE DESIGN CASE 2: HEAVY, AND SHALL BE DESIGNED BY MANUFACTURER TO RESIST ALL FLOOD LOADING.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE A PAD-READY SITE MEETING BUILDING MANUFACTURER SPECIFICATIONS PRIOR TO THE DELIVERY OF THE MODULAR BUILDING. FOLLOW MANUFACTURER SPECIFICATIONS FOR ALL FOUNDATION, UTILITY, AND DELIVERY REQUIREMENTS.
- BUILDING SHALL BE PROCURED WITH 200 AMP SUPPLY AS REQUIRED ON THE MEP PLANS.
- ALL ELECTRICAL SERVICE CONDUITS AND CABLES BELOW THE DESIGN FLOOD ELEVATION (DFE) OF 325.30 SHALL BE WATERPROOFED OR CONFORM TO THE PROVISIONS OF NFPA 70 FOR WET LOCATIONS.
- ELECTRICAL METER SHALL BE CONTAINED WITHIN A WATERPROOF ENCLOSURE AND ANCHORED SECURELY TO PREVENT BUOYANCY IN THE EVENT OF FLOODING.
- EXTERIOR ELECTRICAL COMPONENTS SHALL BE INSTALLED ON THE DOWNSTREAM (SOUTH) SIDE OF THE BUILDING.
- CONTRACTOR SHALL ENSURE ALL MATERIALS WITHIN THIS BUILDING, INCLUDING FINISHES, ARE COMPOSED OF FLOOD DAMAGE-RESISTANT MATERIALS COMPLYING WITH ASCE 24 SECTIONS 1.2 AND 5.0.
- ALL ATTENDANT UTILITIES AND EQUIPMENT BELOW THE DESIGN FLOOD ELEVATION OF 325.30 INCLUDING HEATING, VENTILATION, PLUMBING, AIR CONDITION EQUIPMENT AND DUCTWORK SHALL CONFORM TO ASCE 24 CHAPTER 7 REQUIREMENTS FOR WET FLOODPROOFING.
- ALL UTILITY SERVICE LINES SHALL ENTER BUILDING FOOTPRINT AS SHOWN ON SHEET C2.1. BLOCKOUT LOCATIONS SHALL CONFORM TO BUILDING MANUFACTURER REQUIREMENTS.
- FLOOD VENTS ARE REQUIRED FOR THE EQUALIZATION OF HYDROSTATIC LOADS FROM FLOODING. TOTAL OPEN AREA REQUIRED FOR FLOOD VENTS = 1 SQ. FT., OR 140 SQ. IN. OF ACTUAL OPEN AREA MEASURED FROM THE OUTSIDE OF THE BUILDING. OPEN AREA SHALL BE PROVIDED AS FOLLOWS:
UTILITY ROOM DOOR = 28 SQ. IN. MINIMUM
NORTH BATHROOM = 56 SQ. IN. MINIMUM
SOUTH BATHROOM = 56 SQ. IN. MINIMUM
MINIMUM DIMENSION OF SHORTEST SIDE OF ANY ONE FLOOD VENT = 6 IN



NOTE:

- WHERE SIDEWALK ABUTS PAVEMENT, CONCRETE, CURB, BUILDING, OR OTHER HARD SURFACE, CONTRACTOR TO PROVIDE PRE-MOLDED JOINT FILLER AND EXPANSION JOINT AS SHOWN ABOVE.

- NOTES**
- SOURCE OF HORIZONTAL DATUM, VIRGINIA STATE PLANE COORDINATE SYSTEM SOUTH ZONE (NAD 83), BASED UPON GPS PERFORMED AUGUST 11, 2020 BY DRAPER ADEN ASSOCIATES
 - SOURCE OF VERTICAL DATUM, TOPOGRAPHIC SURVEY BY DRAPER ADEN ASSOCIATES ENTITLED "TOPOGRAPHIC SURVEY RIVANNA PUMP STATION" DATED JULY 20, 2011, PROJECT NUMBER C101380-04
 - THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE COMMITMENT OR TITLE REPORT AND ALL EASEMENTS AND ENCUMBRANCES THAT MIGHT BE DISCLOSED IN A TITLE SEARCH MAY NOT BE SHOWN
 - PROPERTY LINES SHOWN HEREON ARE COMPILED FROM RECORD DOCUMENTS. THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY. UTILITIES SHOWN ARE BASED UPON:
 - SUE QUALITY LEVEL D, ASCE 38-02 - COMPILED RECORDS ONLY
X SUE QUALITY LEVEL C, ASCE 38-02 - VISIBLE EVIDENCE IN CONJUNCTION WITH COMPILED RECORDS
X SUE QUALITY LEVEL B, ASCE 38-02 - FIELD DESIGNATION OF UNDERGROUND UTILITIES PERFORMED BY DRAPER ADEN ASSOCIATES, SUPPLEMENTED WITH MISS UTILITY TICKET #A101102679 AND VISIBLE EVIDENCE IN CONJUNCTION WITH COMPILED RECORDS
SUE QUALITY LEVEL A, ASCE 38-02 - TEST PITS AT LOCATIONS SHOWN HEREON PERFORMED BY (DAA, OTHER) IN CONJUNCTION WITH FIELD DESIGNATION OF UNDERGROUND UTILITIES PERFORMED BY (DAA, MISS UTILITY TICKET # , OTHER), VISIBLE EVIDENCE AND COMPILED RECORDS
 - NO SUE WAS PERFORMED OR REQUESTED FOR THIS SURVEY. UTILITIES SHOWN HEREON ARE BASED ON FIELD OBSERVATION ONLY. THIS TOPOGRAPHIC SURVEY WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF ADAM R. STEVENS, LS FROM AN ACTUAL (X) GROUND OR () AIRBORNE SURVEY MADE UNDER MY SUPERVISION; THAT THE IMAGERY AND/OR ORIGINAL DATA WAS OBTAINED ON AUGUST 11, 14, 20 AND SEPTEMBER 1, 2020; AND THAT THIS PLAT, MAP, OR DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.
 - ELEVATION CONTOUR INTERVAL: 1' (INDEX CONTOURS AT 5' INTERVALS)
 - THIS SURVEY WAS PREPARED FOR THE CITY OF CHARLOTTEVILLE. DRAPER ADEN ASSOCIATES ASSUMES NO LIABILITY FOR REUSE OR MODIFICATION OF THIS DOCUMENT.
 - DRAPER ADEN ASSOCIATES PROVIDES BENCHMARKS FOR THE CONSTRUCTION OF THE IMPROVEMENTS SHOWN ON THESE PLANS. ALL OTHER EXISTING ELEVATIONS ARE FOR REFERENCE TO EXISTING CONDITIONS ONLY. DO NOT USE SPOT ELEVATIONS, FINISH FLOOR ELEVATIONS, ELEVATIONS ON MANHOLES, ELEVATIONS ON SURVEY NAILS, SURVEY HUBS, CONTROL POINTS (HORIZONTAL POINTS PROVIDED) OR ANY OTHER POINTS FOR CONSTRUCTION OTHER THAN THE PROVIDED BENCHMARKS. FAILURE TO UTILIZE AND VERIFY THE PROVIDED BENCHMARKS COULD RESULT IN DAMAGES AND ADDITIONAL COST THAT ARE THE CONTRACTOR'S RESPONSIBILITY.
 - THE AREA WITHIN THE SURVEY LIMITS SHOWN HEREON IS LOCATED WITHIN FLOOD ZONE AE INCLUDING THE FLOODWAY BASED UPON A SCALED LOCATION OF FIRM PANEL #510030289D WITH THE EFFECTIVE DATE OF FEBRUARY 4, 2005 AND REVISED BY LOMR #15-03-1207P WITH THE EFFECTIVE DATE OF FEBRUARY 6, 2017. THIS FLOOD DETERMINATION IS NOT A RECOMMENDATION BY DRAPER ADEN ASSOCIATES TO NOT PURCHASE OR PURCHASE FLOOD INSURANCE COVERAGE AND DOES NOT IMPLY THAT THE REFERENCED PROPERTY WILL OR WILL NOT BE FREE FROM FLOOD DAMAGE.
 - NO INSTALLATION RECORDS, MAPS OR OTHER DOCUMENTS WERE PROVIDED AS REFERENCED IN THE RESPONSES TO MISS UTILITY TICKET #A101102679.
 - NO UNDERGROUND UTILITY PIPE SIZES, MATERIALS OR OWNERSHIP WERE MARKED BY MISS UTILITY FOR STORM AND SANITARY SEWER LINES. INFORMATION FOR THESE LINES IS BASED ON THE FIELD SURVEY.
 - INFORMATION FOR ALL OTHER UTILITY LINES IS BASED ON MISS UTILITY MARKING; WHERE INFORMATION IS ABSENT, INFORMATION WAS NOT PROVIDED BY MISS UTILITY MARKING.

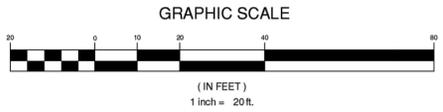


MISS UTILITY NOTES
 TICKET# A101102679, SUBMITTED JAN. 11, 2021

MEMBER	DATE & TIME	RESPONSE
ALBERMARLE COUNTY SERVICE AUTHORITY	ACS26 1/28/2021 15:00	10 MARKED
AT&T	ATT392 1/11/2021 17:45	30 NO CONFLICT, UTILITY IS OUTSIDE OF STATED WORK AREA.
COMCAST	CMC501 1/26/2021 17:11	50 INSTALLATION RECORDS, MAPS OR OTHER DOCUMENTS HAVE BEEN PROVIDED
CENTURY LINK INC	CTL154 1/12/2021 10:12	50 INSTALLATION RECORDS, MAPS OR OTHER DOCUMENTS HAVE BEEN PROVIDED
CITY OF CHARLOTTEVILLE	CVL222 1/15/2021 12:06	11 MARKED, ABANDONED UTILITY LINES MAY BE IN AREA
CITY OF CHARLOTTEVILLE	CVL333 1/15/2021 12:06	12 MARKED UP TO PRIVATELY OWNED UTILITY; CONTACT PRIVATE UTILITY OWNER FOR LOCATE
CITY OF CHARLOTTEVILLE	CVL444 1/15/2021 12:06	12 MARKED UP TO PRIVATELY OWNED UTILITY; CONTACT PRIVATE UTILITY OWNER FOR LOCATE
DOMINION ENERGY INC	DOM500 1/25/2021 14:15	11 MARKED, ABANDONED UTILITY LINES MAY BE IN AREA
LUMOS NETWORKS INC	LMS578 1/14/2021 7:08	30 NO CONFLICT, UTILITY IS OUTSIDE OF STATED WORK AREA.
MARATHA JEFFERSON HOSPITAL	MJH079 1/12/2021 17:50	30 NO CONFLICT, UTILITY IS OUTSIDE OF STATED WORK AREA.
RIVANNA WATER & SEWER AUTHORITY	RWS099 1/15/2021 12:58	10 MARKED
TING FIBER INC	TNG819 1/13/2021 7:55	30 NO CONFLICT, UTILITY IS OUTSIDE OF STATED WORK AREA.

PARCEL 55A151000
280-284 RIVERSIDE AVENUE
CITY OF CHARLOTTEVILLE
DEED BOOK 360 PAGE 547, 549 PLAT
ZONING: MLTP
26.6 ACRES

- LEGEND**
- ELEVATION BENCHMARK
 - WATER VALVE
 - WATER METER
 - UTILITY POLE
 - BOLLARD
 - WOOD POST
 - SIGN
 - TRASH RECEPTACLE
 - END OF INFORMATION
 - DECIDUOUS TREE
 - CONIFEROUS TREE
 - CONCRETE
 - GRAVEL
 - LANDSCAPING
 - +500.00 ELEVATION SPOT
 - ELEVATION CONTOUR
 - TREE LINE
 - EDGE OF ASPHALT
 - WOOD GUARDRAIL
 - OVERHEAD ELECTRIC AND TELEPHONE
 - UNDERGROUND ELECTRIC
 - OVERHEAD CABLE
 - GAS LINE
 - WATER LINE
 - STORM DRAIN LINE
 - SANITARY SEWER LINE



DRAPER ADEN ASSOCIATES REVIEW

THESE PLANS HAVE BEEN SUBJECTED TO TECHNICAL AND QUALITY REVIEWS BY:

- NAME: DERECK PERRY SEPTEMBER 4, 2020
SURVEY PARTY CHIEF
- NAME: ED BUCHANAN SEPTEMBER 4, 2020
SUBSURFACE UTILITY ENGINEER
- NAME: ADAM R. STEVENS, LS SEPTEMBER 4, 2020
PROJECT SURVEYOR
- NAME: CHERYL STOCKTON, LS SEPTEMBER 4, 2020
QUALITY REVIEWER



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- Fayetteville, NC
- Richmond, VA
- Blacksburg, VA
- Hampton Roads, VA
- Northern Virginia
- Virginia Beach, VA

**TOPOGRAPHIC SURVEY OF
A PORTION OF RIVERVIEW PARK
CHARLOTTEVILLE, VIRGINIA**

REVISIONS

02/23/2021	UTILITIES INFORMATION
05/04/2021	FLOOD ZONE NOTE

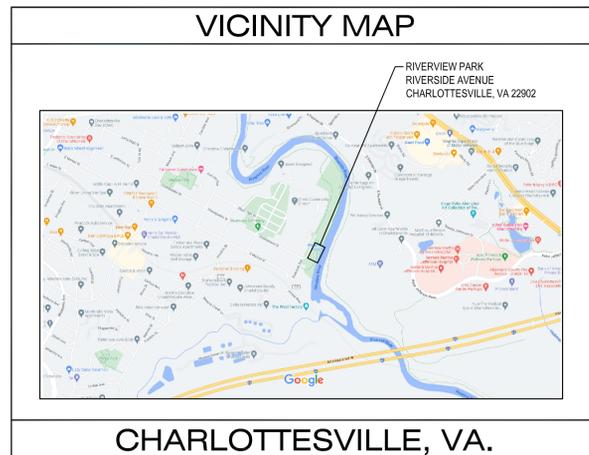
DESIGNED BY:	
DRAWN BY:	ARS
CHECKED BY:	CAS
SCALE:	1" = 20'
DATE:	09/04/2020
PROJECT NUMBER:	20060103-010503

X0.0

RIVERVIEW RESTROOM BUILDING SANITARY FORCE MAIN EQUIPMENT & CONTROLS

CITY OF CHARLOTTESVILLE
DEPARTMENT OF PUBLIC WORKS
CHARLOTTESVILLE, VIRGINIA

REVISION	DATE



INDEX OF DRAWINGS	
T-1	TITLE SHEET
P-1	SANITARY SEWER CONTROLS PLAN, NOTES AND DETAILS

REFERENCE CODES AND INFORMATION
2018 VIRGINIA CONSTRUCTION CODE (VCC)
2018 VIRGINIA PLUMBING CODE
2017 NATIONAL ELECTRICAL CODE, NFPA 70
THIS PROJECT CONSISTS OF PROVIDING SANITARY SEWER SYSTEM EQUIPMENT TO SERVE THE OWNER-PROVIDED PREFABRICATED RESTROOM BUILDING, INCLUDING GRINDER PUMP, FLOOD MONITORING SYSTEM AND ASSOCIATED CONTROLS.

PROJECT TEAM
OWNER
CITY OF CHARLOTTESVILLE DEPARTMENT OF PUBLIC WORKS FACILITIES MANAGEMENT 305 4TH STREET, NW CHARLOTTESVILLE, VA 22902 TEL 434-970-3302 FAX 434-970-3659
ENGINEER
LAWRENCE PERRY & ASSOCIATES, INC. 15 E. SALEM AVENUE, SE, SUITE 101 ROANOKE, VA 24011 TEL 540-342-1816 FAX 540-344-3410

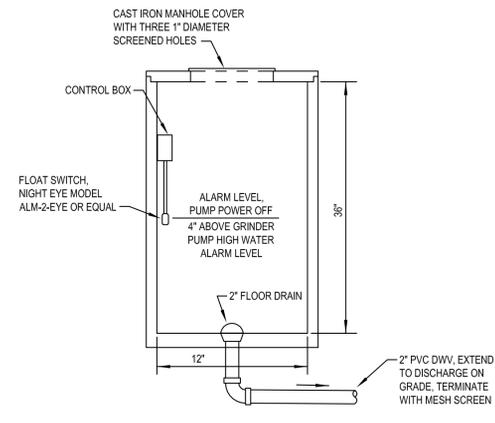
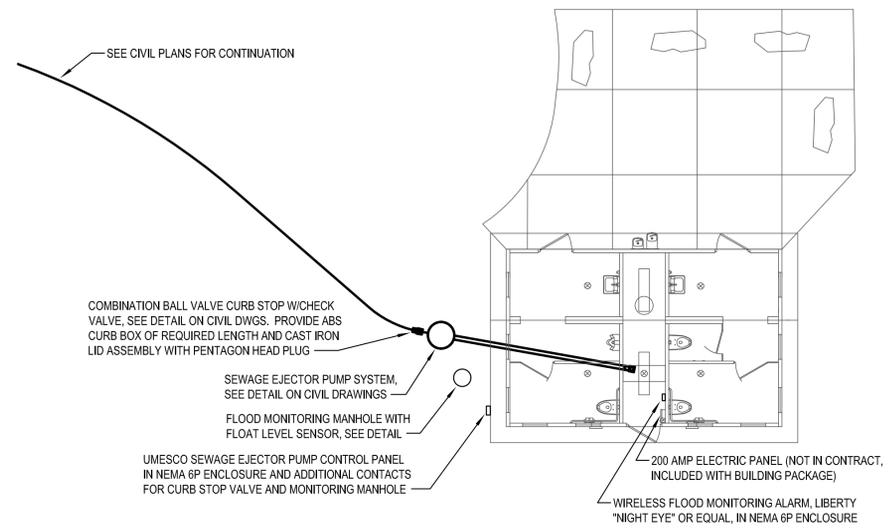
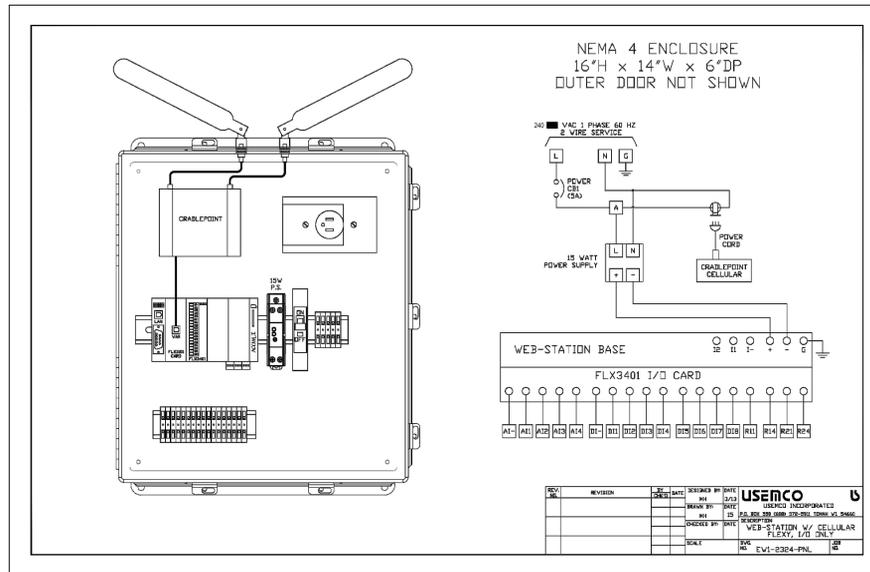
RIVERVIEW PARK - RESTROOM BUILDING
FORCE MAIN SHUTOFF CONTROLS
CHARLOTTESVILLE, VA
TITLE SHEET



DESIGNED MGW	DRAWN MGW
CHECKED MGW	APPROVED RDF
COMM. NO. 22101.33	DATE 01/19/2023
SHEET T-1	

SANITARY FORCE MAIN PUMP SYSTEMS SPECIFICATIONS

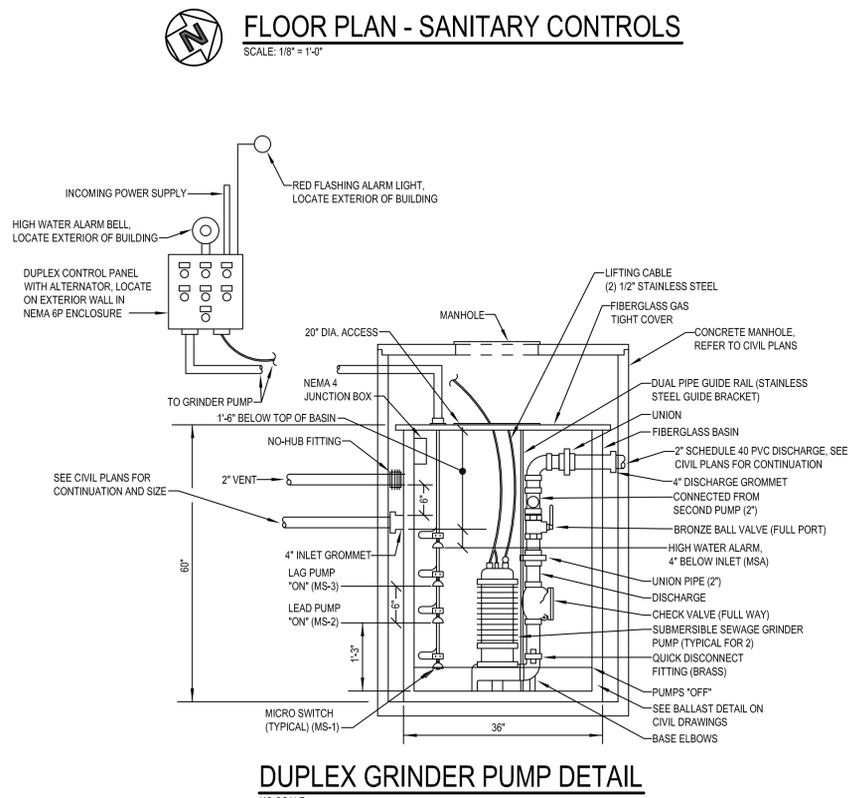
- A. Submersible Grinder Pump Acceptable Manufacturers: Manufacturers (Subject to compliance with requirements):
- Ebara
 - Sta-Rite
 - Grundfos
 - Hydromatic
 - Liberty Pumps
 - Zoeller
- B. Provide a E/One Extreme Series Model T260, Zoeller Model 818 or accepted equal by one of the above listed manufacturers, duplex submersible sewage grinder pump for automatic operation. Each pump shall be rated at 1 HP, 240 volts, 1 phase, 60 hertz, 3450 R.P.M. The unit shall have a minimum capacity of 19 GPM at 36 feet total dynamic head. System shall include grinder pumps mounted on a stainless steel integral stand, tank, NEMA 4 electrical quick disconnect, pump removal harness, discharge assembly, shut-off valve, anti-siphon valve/check valve assembly, electrical alarm assembly and all necessary internal wiring and controls.
- C. The pump volute, motor and seal housing shall be high quality gray cast iron, ASTM A-48, Class 25. All external mating parts shall be machined and Buna N Rubber O-ring sealed on a beveled edge. All fasteners exposed to the pumped liquids shall be 300 series stainless steel.
- D. Electrical Power Cord: Electrical power cord shall be water resistant 600V, 60 Deg. C., UL and or CSA approved and applied dependent on amp draw for size. The pump shall be protected with compression fitting and epoxy potted area at the power cord entry to the pump. The power cord leads shall be connected to the motor leads with extra heavy connectors. The cord cap assembly shall be sealed with a Buna N Rubber O-ring on a beveled edge to assure proper sealing.
- E. Motor: The stator, rotor and bearings shall be mounted in a sealed submersible type housing. The stator windings shall have Class F insulation, (155 Deg. C. or 311 Deg. F.), and a dielectric oil filled motor, NEMA L design. The pump and motor shall be specifically designed so that they may be operated partially dry or completely submerged in the liquid being pumped. Stators shall be securely held in place with a removable end ring and threaded fasteners so they may be easily removed in the field without the use of heat or a press. Stators must be capable of being repaired or rewound by local motor service station. No special tools shall be required for pump and motor disassembly. Pump shall be equipped with heat sensors. The heat sensors shall be a low resistance, bimetal disc that is temperature sensitive. It shall be mounted directly in the stator and sized to open at 120 Deg. C. or 130 Deg. C. and automatically reset at 30-35 Deg. C. differential. The sensor shall be connected in series with the motor starter coil so that the starter is tripped as a heat sensor opens. The motor starter shall be equipped with overload heaters so all normal overloads are protected by external heater block.
- F. Bearings and Shaft: An upper radial bearing and a lower thrust bearing and a lower thrust bearing shall be required. These shall be permanently lubricated by the dielectric oil which fills the motor housing. The shaft shall be machined from a solid 416 stainless steel and be a design which is of large diameter with minimum overhang to reduce shaft deflection and prolong bearing life.
- G. Seals: The pump shall have two mechanical seals, mounted in tandem, with an oil chamber between the seals. Seals shall be used with the rotating seal faces being carbon and the stationary seal faces to be ceramic. The lower seal shall be replaceable without disassembly of the seal chamber. The pump shall be equipped with a seal leak detection probe and warning system.
- H. Impeller: Impeller shall be of bronze construction and non-overloading. Impeller shall be of the multivane, semi-open design with pump-out vanes on the backside of the impeller to prevent grit and other materials from collecting in the seal area. Impeller shall not require coating. Impellers shall be hydraulically and statically balanced. The tolerance values shall be as listed below according to the International Standard Organization grade 6.3 for rotors in rigid frames. The tolerance is to be split equally between the two balance planes which are the two impeller shrouds. For 3500 RPM, 0.1 in.-oz./Lb. of impeller weight; for 1750 RPM, 0.2 in. -0oz./Lb. of impeller weight.
- I. Grinder Cutters: The combination centrifugal pump impeller and grinder unit shall be attached to the common motor and pump shaft made of 416 stainless steel. The grinder unit shall be on the suction side of the pump impeller and discharge directly into the impeller inlet leaving no exposed shaft to permit packing of ground solids. The grinder shall consist of two stages. The cutting action of the second stage shall be perpendicular to the plane of the first cut for better control of the particle size. The grinder shall be capable of grinding all normal materials into a finely ground slurry no greater than 1/4 inch. Both stationary and rotating cutters shall be made of 440C stainless steel hardened to Rockwell 60C and ground to close tolerance.
- J. Painting: The pump shall be painted after assembly, but before testing with a lead free air dried enamel. The paint shall be applied in one coat with a minimum mil thickness of 3 to 4 mils.
- K. Testing: Commercial testing shall be required and include the following:
- The pump shall be visually inspected to confirm that it is built in accordance with the specification as to HP, voltage, phase and hertz.
 - The motor and seal housing chambers shall be hi-potted to test for moisture content and/or insulation defects.
 - Pump shall be allowed to run dry to check for proper rotation.
 - Discharge piping shall be attached, the pump submerged in water and amp readings shall be taken in each leg to check for an unbalanced stator winding. If there is a significant difference in readings, the stator windings shall be checked with a bridge to determine if an unbalanced resistance exists. If so, the stator will be replaced.
- L. Warranty: The pump unit or any part thereof shall be warranted against defects in material or workmanship within one year from date of installation or 18 months from date of manufacture, whichever comes first, and shall be replaced at no charge with a new or remanufactured part, F.O.B. factory or authorized warranty service station. The warranty shall not assume responsibility for removal, reinstallation or freight, nor shall it assume responsibility of incidental damages resulting from the failure of the pump to perform. The warranty shall not apply to damage resulting from accident, alteration, design, misuse or abuse.
- M. Sump Basin: Basin shall be constructed of fiberglass, 36 inches diameter x 60 inches deep, installed in a concrete manhole. Provide basin with (1) 2 inch inlet and one (1) 2 inch outlet. Basin covers shall be steel. Covers shall be bolted onto the top flange of the basin. Basin covers shall have required openings for pumps and controls plus a 2 inch vent connection. Covers shall be furnished with bolts and gasketing for gasite field assembly. Pumps shall be furnished with bolts and gasketing for gasite field assembly. Basin shall include concrete ballast, see Ballast Detail on civil drawings.
- N. Control Panel (USEMCO Web-Station, Drawing #EW1-2324-PNL):
- Duplex pump control panel shall be a USEMCO NEMA 6P #304 stainless steel wall mount submersible control panel for operation on a 208 volt single phase 4 wire service, to include the following: Inner door, main lugs, lightning arrester, (2) pump circuit breakers, (2) NEMA rated FVNR starters with solid state overloads and resets, control circuit breaker, condensation heater and thermostat, intrinsically safe float circuit controller/alternator, USEMCO cellular based web station remote monitoring and control, high level light, (2) Hand-Off-Auto selector switches, (2) run lights, (2) run time meters, overtemp shutdown, (2) seal fail alarm lights and terminal strip. Additional contacts shall be provided for connection to float switch in flood monitoring manhole. Contractor shall provide seal float relays and (5) floats.
 - Contractor shall furnish all labor, materials, equipment and incidentals required to provide duplex motor control panel as specified. The enclosure shall have provisions for padlocking. A nameplate shall be permanently affixed to the panel and include the model number, voltage, phase, hertz, ampere rating and horsepower rating. A warning label against electric shock shall be permanently affixed to the outer door.
- O. Curb Stop/Check Valve Assembly: The curb stop shall be pressure tight in both directions and shall be designed to withstand a working pressure of 235 psi. The ball valve actuator shall include position stop features at the fully open and closed positions. The stainless steel check valve shall be integral with the curb stop valve. The check valve shall provide a full ported 2" passageway and shall introduce minimal friction loss at maximum rated flow. The flapper hinge design shall provide a maximum degree of freedom and ensure seating at low back pressure. All plastic fitting components shall be in compliance with applicable ASTM standards. All pipe connections shall be made using compression fitting connections including a Buna-N O-ring for sealing to the outside diameter of the pipe. A split-collet locking device shall be integrated into all pipe connection fittings to securely restrain the pipe from hydraulic pressure and external loading caused by shifting and settling.
- P. The curb box shall be constructed of ABS conforming to ASTM D-1728. Lid top casting shall be cast iron conforming to ASTM A-48 Class 25, providing magnetic detectability, and be painted black. All components shall be inherently corrosion-resistant to ensure durability in the ground. Curb box shall provide height adjustment downward (shorter) from their nominal height.
- Q. Sequence of Operation:
- Below 1'-3" water depth in grinder pump manhole pumps shall be off. At 1'-3" water depth lead pump shall cut on. At 1'-9" water depth lag pump shall cut on. At 4 inches below manhole inlet system shall send a high water alarm.
 - Grinder pump shall be continuously energized except during flood events. During flood events, water level sensor in flood monitoring manhole shall de-energize grinder pumps, and system shall send an alert via email and text messages to maintenance personnel of high water level. Maintenance personnel shall have capability to shut down the pump system remotely.
 - System shall have manual reset only.
- R. Make tests under actual or simulated operating conditions and prove full compliance with design and specified requirements. Tests of the various items of equipment shall be performed simultaneously with the system of which each item is an integral part. When any defects are detected, correct defects and repeat tests.
- S. Flood Sensor Manhole Drain: Equal to Josam Model 39600 cast iron planter drain, bottom outlet, secured dome with stainless steel mesh screen secured to dome.



FLOOD MONITORING MANHOLE DETAIL
NO SCALE

ELECTRICAL NOTES:

- UTILIZE THE 200 AMP SERVICE PANEL IN THE BUILDING TO PROVIDE POWER TO THE DUPLEX GRINDER PUMP CONTROL PANEL. PROVIDE CIRCUIT BREAKER AND WIRING SIZED AS REQUIRED BY THE APPROVED SUBMITTED SANITARY FORCE MAIN PUMP SYSTEM MANUFACTURER.
- PROVIDE ALL REQUIRED CONDUIT BETWEEN THE DUPLEX CONTROL PANEL AND THE PUMP, SENSORS, MONITORING ALARM PANEL, AND ALL OTHER ACCESSORIES.
- WHERE ANY OTHER EQUIPMENT ASSOCIATED WITH THE SANITARY FORCE MAIN PUMP SYSTEM REQUIRES 120 VOLT POWER PROVIDE ADDITIONAL CIRCUIT BREAKERS IN 200 AMP SERVICE PANEL AND WIRING SIZED AS REQUIRED BY THE APPROVED SUBMITTED SANITARY FORCE MAIN PUMP SYSTEM MANUFACTURER.
- DUE TO THE ENVIRONMENT OF THIS EQUIPMENT BEING INSTALLED IN A FLOOD ZONE ALL CONDUIT SHALL BE RIGID METAL CONDUIT (RMC), EXCEPT WHERE CONNECTING TO THE PUMP, WHICH SHALL BE LIQUID-TIGHT FLEXIBLE METAL CONDUIT (LFMC). RMC FITTINGS SHALL BE CAST MALLEABLE IRON, GALVANIZED OR CADMIUM PLATED, COMPATIBLE WITH CONDUIT MATERIALS CONFORMING TO NEMA FB-1. LFMC FITTINGS SHALL BE CADMIUM PLATED, MALLEABLE IRON FITTINGS WITH COMPRESSION TYPE STEEL FERRULE AND NEOPRENE GASKET SEALING RINGS, WITH INSULATED THROUGH.



DUPLEX GRINDER PUMP DETAIL
NO SCALE

L P A
LAWRENCE PERRY & ASSOCIATES
 Consulting Engineers
 15 E Salem Avenue SE, Suite 101
 Roanoke, Virginia 24011
 Ph: (540) 342-1816
 Fax: (540) 344-3410

REVISION	DATE

RIVERVIEW PARK - RESTROOM BUILDING
 FORCE MAIN SHUTOFF CONTROLS
 CHARLOTTESVILLE, VA
 SANITARY SEWER CONTROL PLAN, NOTES AND DETAILS

DESIGNED MGW	DRAWN MGW
CHECKED MGW	APPROVED RDF
COMM. NO. 22101.33	DATE 01/19/2023
SHEET P-1	

